

Consultation Paper 1.6

Road Passenger Transport: Accessibility in Urban and Rural Areas

Executive Summary

One of the policy recommendations in the Background Document is that road transport should be deregulated. At the same time it is recognised that there is a need to ensure that reliance on market forces does not leave urban or rural groups physically isolated. In many remote areas, accessibility to regional towns and service centres is low or almost non-existent. Because of lack of roads and low demand, commercial transport operation is often not viable and this can leave pockets of the population in virtual isolation.

In the Policy Statement it is stated that the Government's role with regard to accessibility is threefold:

- To formulate policies and establish standards with regard to accessibility.
- To identify and establish an institutional framework which can effectively identify and put in place the means to implement policies and improve and achieve standards of accessibility.
- To provide finance to ensure improved accessibility.

One of the points made in this Consultation Paper is that whilst the government has a vital role to play with regard to accessibility, that role may differ between urban and rural areas.

Low accessibility in rural areas is a problem with no evident solutions. To apply a system of detailed regulations for the private sector would appear non-constructive if the problem is that the commercial incentive is lacking. The possible concept of "concession packages" where the right to operate profitable routes is linked to the obligation of operating "social" routes may work in urban areas, but is not suitable for rural areas. In order to increase the understanding of the situation in rural areas, and to identify possible strategies, it is recommended that as a first step a series of rural transport studies are undertaken in different regions.

If deregulation seems to be the natural principle for long distance and rural transport, the case can be different in urban areas, in particular large cities. If a city wants to have a system of relatively few, high-capacity buses operating in an integrated network, then regulation is a necessity. The recommended policy guideline for urban areas is therefore that local governments should be allowed to impose a regulatory system that suits them.

The preferred situation in a city is, in principle, that public transport is operated mainly by the private sector. This does not mean that the public sector should withdraw from its ultimate responsibility of providing public transport services in urban areas. On the contrary, by introducing and recognizing a clear distribution of roles and functions between the public and the private sector, it will be possible to handle this responsibility more efficiently. The proposed instrument for this is the establishment of a Public Transport Authority (PTA).

Under the general policy that public transport operations will be provided exclusively by the private sector, the PTA will function as the interface between the public sector and the private sector. It constitutes an instrument for planning and regulation of the public transport sector

and for monitoring of the performance of private transport operators. Through the PTA, the local government sets the framework in which the private sector operates and it also intervenes when necessary.

It is proposed that donor assistance is sought for (i) drafting of legislation to enable municipalities to set up a PTA; and (ii) to implement the PTA in Kabul. As part of the last effort, the restructuring of the current route network, in a planned way that considers present and expected future needs of the city, should also be undertaken.

Recommendations:

The recommendations are that

- a series of rural transport studies be carried out in order to better understand the transport situation in rural areas and to identify strategies for how to improve accessibility
- in larger urban areas, the concept of a PTA be considered, and that legislation be passed to enable municipalities to establish a PTA.
- required actions are taken to enable Kabul to set up and launch a PTA, along with a restructuring of the present transport network.

Actions:

The MOT should request for donor assistance to

- carry out the rural transport studies
- prepare and draw up the legislation to enable the establishment of PTAs
- assist Kabul to restructure its public transport network and prepare for and launch a PTA.

Introduction

One of the policy recommendations in the Background Document is that road transport should be deregulated. At the same time it is recognised that there is a need to ensure that reliance on market forces does not leave urban or rural groups physically isolated

In this consultancy paper, some possible policies and mechanisms to this purpose will be discussed. Given the urgency of the policy-making process and also the scarcity of reliable data (much documentation was destroyed and might have been obsolete anyway due to fundamentally changed preconditions) the TSR project relies, to a large extent, on the experience of experts and consultants. This is also the case for this Paper. Where feasible, international experiences have been used to illustrate some of the strategic choices now facing the Government.

As a general background, information about the present road transport sector in Afghanistan is included in Annex 1 to this Paper.

Accessibility

The general tendency today is to reduce central planning and rely on market forces. This mostly works well but sometimes undesired side-effects occur. In public transport, there is a risk that the industry, driven by profits, finds certain geographical areas or population groups uninteresting to serve. The result may be pockets of low accessibility which is a concern for society.

The optimal market for a public transport operator is a densely populated area, inhabited by people able to pay high fares (but without private transport), and connected with a good road infrastructure. Consequently, the potential left-out markets are those where none of this conditions are fulfilled. This can be the case in mountainous rural areas without roads but also in urban areas.

A special aspect on accessibility is the interrelation with the gender issue. Public transport system are often not designed in the best interest of women and in some cases, like Afghanistan, cultural and religious traditions reduce their accessibility further.

In many countries, there is an awareness of the problem of unequal accessibility and governments often attempt to intervene in order to improve the situation for the less fortunate. The issue that then needs to be discussed is the role of the private and the public sectors respectively and the degree of regulation needed.

In the Policy Statement it is stated that the Government's role with regard to accessibility is threefold:

- To formulate policies and establish standards with regard to accessibility.
- To identify and establish an institutional framework which can effectively identify and put in place the means to implement policies and improve and achieve standards of accessibility.
- To provide finance to ensure improved accessibility.

One of the points made in this Consultation Paper is that whilst the government has a vital role to play with regard to accessibility in urban and rural areas, that role may differ between urban and rural areas, as explained below.

Rural Transport

In many remote areas, accessibility to regional towns and service centres is low or almost non-existent. Because of lack of roads and low demand, commercial transport operation is often not viable and this can leave pockets of the population in virtual isolation.

This is a dilemma with no evident solutions. To apply a system of detailed regulations for the private sector would appear non-constructive if the problem is that the commercial incentive is lacking. The possible concept of “concession packages” where the right to operate profitable routes is linked to the obligation of operating “social” routes may work in urban areas (see Section 4) but is not suitable for rural areas. Thus, the main principle for rural transport also should be a deregulated private sector.

There can, however, be a case for government intervention in situations where the private sector is unable to deliver the desired service.

The first option for the public sector to intervene is to provide infrastructure in the form of accessible roads. Wherever there is a feasible road connection and a minimum of demand, chances are that a private transport enterprise will emerge. This approach has the advantage that no detailed regulations or complex schemes are necessary. The subsidy is a one time effort that can, in many occasions, be donor financed. It should be noted, however, that this may not be enough. “Evidence from development projects funded by the World Bank and other donors shows that good roads do not necessarily mean good transport services. Indeed, it is common to see good quality roads used mainly by pedestrian and non-motorized means of transport in developing countries”¹.

The second option would be for the public sector to subsidise transport services that could be operated either by private operators under some form of contract or by the public sector itself. A daily or weekly service to the region centre could provide access to essential services such as health care, and could possibly be combined with postal services as has been done in remote areas in Europe.

How this should be organised must be carefully considered. It could be done by directly contracting private transport operators to supply a service they would otherwise not do. Such a strategy has to be used with some caution. There is a risk that market forces can become distorted if one operator is favoured in comparison with others. He may become dependant on government subsidies and if these subsidies should stop, then there is no one to replace him since the others have left the market. If the scheme is adopted it requires the existence of a planning body with high capability and integrity and should preferably be done through a bidding procedure.

¹ World Bank Technical Paper 525; Appendix 2.

Another possibility to support the private sector is to provide financial assistance in the form of credit schemes for vehicle purchase. This is an indirect type of subsidy that it is much more difficult to target directly to the desired purpose. There is always a risk that such vehicles are used in other places where potential earnings are better and then the inaccessible areas in question would still get no transport supply.

It would also be possible for the public sector itself to operate services in its own organization, such as e.g. Millie Bus. This must be considered with caution since the existence of subsidised public operators will almost certainly have a negative effect on the private sector. There is sometimes an argument that this approach guarantees continuity but this is questionable; if subsidies dry up the organisation does tend to stay on but without any activities being undertaken (the trolleybus organisation in Kabul is a good example).

Whether schemes such as the ones above should be the responsibility of the central government or some level of local government is often a matter of debate – both may want to enjoy the resulting political goodwill. In Afghanistan, of course, this issue is more politically loaded than usually.

A principle that appears constructive – but may need more consideration – would be that the central government create some form of rural transport funds. This could be justified in a situation where the local tax base is weak and foreign aid is channelled through Kabul. Local governments would then have the freedom to design schemes and request financial support from the central government.

It appears that not enough knowledge and understanding exists of the rural transport problems in the (very) different areas and regions of Afghanistan. If so, it would be premature to legislate detailed regulations. It is therefore recommended that the door is left open for government or local government intervention with detailed forms of intervention to be defined gradually.

In order to increase the understanding of this problem, it is recommended that a series of rural transport studies are undertaken in different regions. These could be done simultaneously and be sponsored by different donors under the umbrella of one coordinating unit, and the results could then be used for defining interventions. An example of a possible terms of reference for such studies is enclosed as Annex 2. The cost of the studies have tentatively been estimated at USD 0.5 million.

Urban transport

If deregulation seems to be the natural principle for long distance and rural transport, the case can be different in urban areas, in particular large cities. Whether, and to what degree, regulations are required is in fact highly dependent on the ambitions of the public sector (the municipality or the government).

In the urban system, transport interacts with land use and demography and contributes to shape the city and its function. For an authority that wishes to apply a planned city development, therefore, the transport system should be under its control.

Generally speaking, urban public transport can have two forms; the “fleet operation” concept and the “individual operation” concept (see fig 1 below).

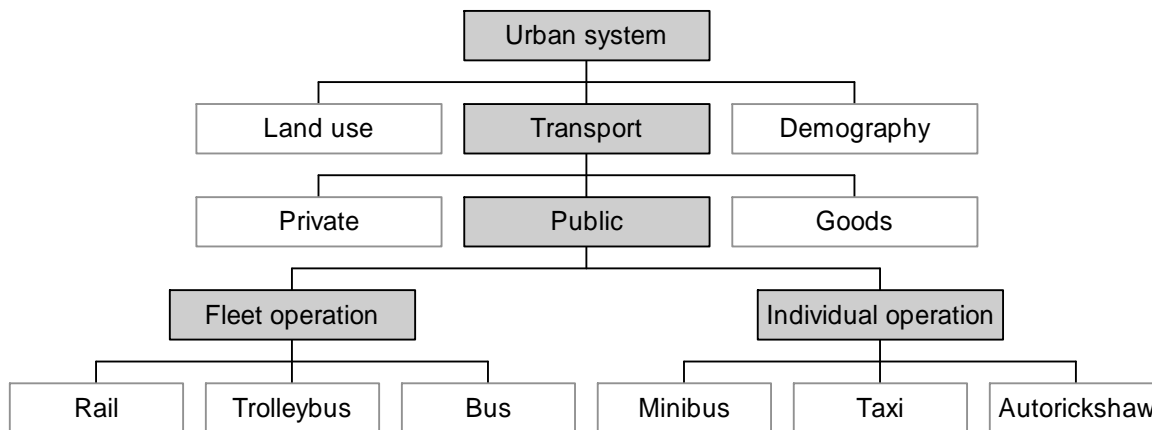


Fig 1. Two concepts for urban public transport

The “fleet operation” concept is the traditional form of public transport in e.g. Europe. It is based on high or medium capacity vehicles operating routes in an organized system with fixed routes and planned frequencies. There is a limited number of operators - in the extreme case only one – operating in a company form with employed drivers. The technology can be rail (subway, tramway), trolleybus or bus but the main concept is the same as the system forms a more or less integrated network of services. Generally speaking, the concept of fleet operation tends to be associated with regulation by the public sector. Also, previously at least, the normal case in many cities was that operations were also done by the public sector and Millie Bus is of course a good example in Afghanistan. There is, however, a growing international interest in ways to combine the fleet operation concept with private sector operation, often through the regulation by a special agency.

The “individual operation” concept is based on a large number of small vehicles operating “one by one”. Sometimes drivers own the vehicles they operate but more common is the system with owners investing in one or more vehicles, e.g. minibuses, and drivers leasing the vehicles on a daily basis. In a situation with high unemployment this can be a profitable business for the owner since his risk is minimal. The individual operation concept can be said to be associated with deregulation and with private sector operation.

As indicated above, there is a relation between the degree of regulation and the resulting type of public transport system in a city. Market forces will satisfy the industry but may not always produce the kind of system that is considered desirable by city authorities. A fully deregulated system will, typically, require little intervention and no subsidies, but will on the other hand result in a non-planned system dominated by large numbers of very small vehicles, sometimes contributing to congestion, air pollution and uneven service levels.

Consequently, if a city wants to have a system of relatively few, high-capacity buses operating in an integrated network, then regulation is a necessity. This is apparently already the case in Kabul. In this situation, it would be unfortunate with a sweeping legislation that allowed anyone to operate public transport services at will in urban areas (this is the kind of “reform” that has led to grave problems in e.g. South Africa). Therefore, the recommended policy

guideline for urban areas is that local governments should be allowed to impose a regulatory system that suits them. The preferred solution then would be private sector operation (or possibly a combination of public and private sector) in a regulated system. This is also the recommended development in Kabul; see further Annex 3.

The Public Transport Authority

The preferred situation in a city is that public transport is operated mainly by the private sector. This does not mean that the public sector should withdraw from its ultimate responsibility of providing public transport services in urban areas. On the contrary, by introducing and recognizing a clear distribution of roles and functions between the public and the private sector, it will be possible to handle this responsibility more efficiently. The proposed instrument for this is the establishment of a Public Transport Authority (PTA).

The idea of the PTA, as introduced in various countries, including Sweden, is that local government can devote its resources to the task of organizing, planning and monitoring the performance of a predominantly private sector. By coordinating and orchestrating the efforts of private operators in a competitive environment, the drive and efficiency of the private sector can be directed towards the benefit of public transport users. As will be commented upon elsewhere, a special transition strategy will be required for Kabul; see Annex 3.

Under the general policy that public transport operations will be provided exclusively by the private sector, PTA will function as the interface between the public sector and the private sector. It constitutes an instrument for planning and regulation of the public transport sector and for monitoring of the performance of private transport operators. Through PTA, the local government sets the framework in which the private sector operates and it also intervenes when necessary.

A description of the main features of a PTA is given below; see also fig 2. It is to be noted that all of these functions will not be feasible to establish in the short term and that the requirements may be different in large cities like Kabul and others.

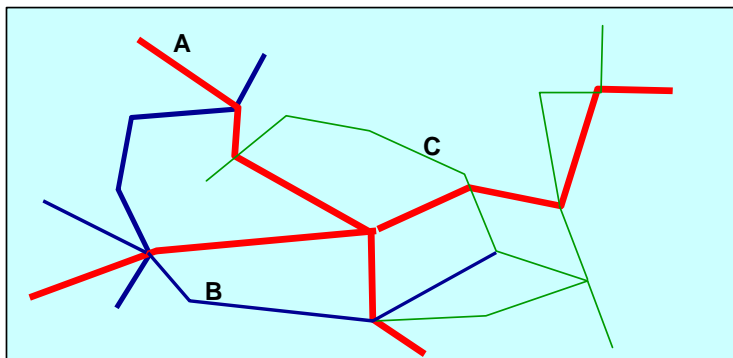
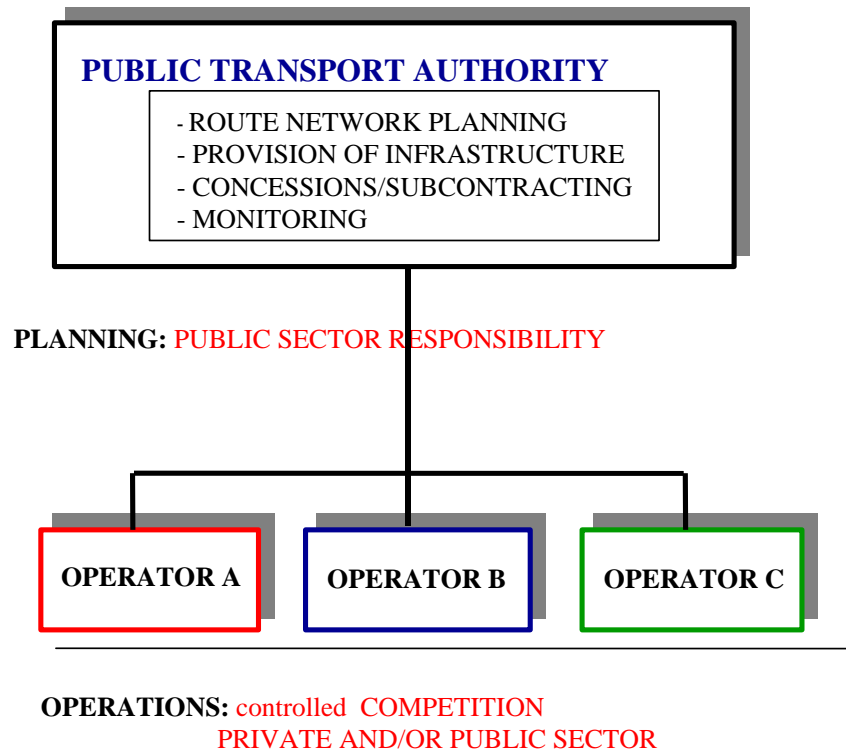


Fig 2. Public Transport Authority

Objectives of a PTA

The overall objective in creating a PTA is to introduce and maintain better public transport services. This is a task to be undertaken on many different levels, and one which is a continuous process rather than an isolated effort. The main challenge for a PTA is to make the public transport system work as an integrated system rather than, as now, an incomprehensible mass of individual routes operated by vehicles of shifting quality and with varying standard. Public transport is intended to constitute a serious alternative for the whole urban population; at the same time as it must fulfil social objectives and cater for low income groups. An efficient network of routes designed for the benefit of the passengers can speed up travel times. Improved enforcement of operational and managerial requirements can improve standard and safety. Malpractice and exploitation of passengers and drivers should be prevented. Fares will be balanced so as to allow for a sustainable system while at the same time providing an affordable service. Services will be balanced and competition introduced so as to avoid excessive profits in one part of the system while other areas are under-supplied. PTA will also

gradually shape the public transport sector in a way which is compatible with other urban transport objectives such as efficient use of road space, elimination of congestion and improvement of the environment.

Legal Form and Financing

The PTA is envisaged to be created by a "framework" law which will enable it to assume control of the situation, and in which the objectives and intentions of the PTA will be clarified. Basic legislation will be introduced and existing conflicting legislation will be removed. In particular it is necessary to ensure that the issuing of licenses for public transport routes becomes the exclusive right and responsibility of the PTA. In Appendix 4, an example of a basis for legal drafting is provided for Kabul.

The PTA will preferably be set up as a local government agency although it could possibly also be under the Ministry of Transport. There should be a Board or a Steering Committee representing relevant authorities and agencies concerned with the public transport issue. It is foreseen that the private sector will also be represented in the Board. The PTA will be able to collect, on behalf of the Government, license fees and other revenues from the public transport sector and, vice versa, to support non-profitable operations through direct payments or through the packaging of routes.

The operation costs of the PTA itself will primarily be covered by such funds. This should be secured by legislation in order for PTA to survive political changes.

The PTA as the local government's representative will be empowered with

- "monopoly ownership" of all existing, potential and future public transport routes including bus, minibus and taxi as well as conceivable other modes such as rail-based systems
- exclusive right to define routes and to enter contracts with operators to operate them under terms, conditions and performance requirements decided by PTA
- responsibility to monitor and control the performance of operators and to impose sanctions if standards are not met
- right to negotiate terms and conditions for existing operators to change or modify their existing operations and routes

Working Procedures and Functions of PTA

PTA will prepare a detailed master plan for the public transport route network. This plan will be constantly upgraded and modified as the city develops and new areas emerge. The PTA will keep track of ridership and passenger utilization of the system and will analyze present and potential travel demand and produce forecasts for the long and short term. It will also keep track of the institutional and organizational development of the private sector at any given time. It should use modern specialized methodology making possible a detailed cost/revenue analysis on a route level as well as on a company level. This continuous process can be called "route network maintenance" and is crucial in a changing city.

Based on detailed analysis, routes or packages of routes will be defined and leased to operators for a certain time period - 3-5 year periods are common in similar cases in other countries. The PTA specifies operational and service requirements such as vehicle types, frequen-

cies, capacity, operating hours etc. and awards contracts after a competitive bidding process which can be designed in different ways. The PTA will normally issue contracts for a route as the smallest operating unit and will invite companies and associations to submit bids. For profitable routes, operators may be willing to pay a fee for the right to operate. For other routes there may have to be a negative fee (see below).

Through its powers to issue licenses and enter into contractual agreements, the PTA can and will influence and shape the structure of the private sector, for example by promoting the "fleet operation" concept. Professional operating companies and/or associations will be identified and supported. If, for example, at one specific time of issuing a route or a package of routes, a route needs more buses than any potential bidding company has, then part of the contractual arrangement could well be a financing support for the purchase of more buses and the paying back of those could be part of the license fee agreement. In many cases, especially in the initial stages, there is not enough capacity in the hands of established companies. In those cases, individual operators can be encouraged to form associations of the kind which has been prevalent in e.g. Latin American countries for many years. The form and legal status of these can vary. They could be cooperatives, economic unions or even route associations, (although experience from some countries is that an association based on the route is less favourable since it tends to freeze the route network structure and is less feasible in a bidding situation). The main requirement is that the association must assume a combined responsibility for its members and will be represented by an appointed leadership. The ideal situation would be one in which there is a sufficient number of medium-sized companies and associations to make competitive bidding meaningful. The PTA should also devote resources to the support and development of the private sector. This can be done by management training activities and assistance of different kinds. It is important to state that the PTA should not be seen as opposite to the private sector but, on the contrary, should support it and stimulate it to reach an overall better performance which will benefit users and operators alike.

As regards the vehicle fleet, the PTA can and should influence the composition of vehicle types in the public transport system in a way which is compatible with other objectives in urban transport and the urban environment as a whole. Thus, it is possible that the PTA, at least in larger cities, may promote a development towards medium-capacity (or even high-capacity) buses rather than towards smaller units because of their higher potential for road space efficiency and environmental benefits. Such potentials could be exploited in a well planned and monitored system in which different vehicle types exist and are given roles which suite their characteristics.

The regulation and issuing of licenses to taxis would fall within the jurisdiction of the PTA. Since the taxi sector is at present an important component of the urban transport system, it is to be expected that the PTA will handle this sector with care. Gradual conversion to larger operating units as well as larger vehicles could be encouraged.

The PTA will follow up and monitor private operators, constantly evaluating their performance in relation to the service and performance requirements stated in their contracts or licenses. In the case of non-fulfilment, the PTA will have the powers to introduce sanctions adapted to the situation, probably of economic nature. In serious cases, the operator may lose his contract altogether. It is important to establish that the responsibility of the conduct of individual drivers rests with the company or association, and sanctions will be imposed on that level, not to the individual driver. Only in the case of a traffic offence will the driver be directly responsible and then it is a matter to be enforced by the traffic police. Since this

monitoring process with the possibility of economic sanctions is a sensitive issue, it is important that it is done in an objective way by personnel of high integrity.

The PTA may lease out attractive routes for a fee. Such revenues can be diverted back to the public transport sector in order to improve service levels. In this way, surplus from profitable routes can for example be used to support non-profitable operations in low-income areas which may be seen as social service obligations by the local government. This can be arranged in the form of "negative license fees", in which the operator gets paid (after a competitive bidding process) for operating a route which is non-profitable but necessary from social reasons. The PTA thus provides an efficient mechanism for the local government to influence the system and to stimulate it economically. It should be understood that this is a very different concept than the kind of inefficiency-rewarding subsidy that is constituted by simply covering the deficits of an operating company. Funds could also be created in order to facilitate bus stops, terminals and other infrastructure, to provide management support to emerging companies and route associations and possibly for financing of vehicles. As operating units become larger, route packages can be designed as internally cross-subsidizing in which a successful bidder undertakes to operate both "fat" and "lean" routes within a sector. This must be carefully followed up to control that the operator really operates all routes as stipulated.

The fare system and especially the level of fares are of paramount importance in a public transport system. The construction of the fare system, in particular whether it is a flat fare or a distance-related fare affects the way passenger use the system and the way routes can be designed. The fare level affects the profitability and the sustainability of the whole sector, but is also has a high impact on users, particularly low income groups. The fare system is therefore an important parameter in the design of an integrated system. The anticipated fare is an important component in a route licensing contract. The PTA, as the main responsible body for public transport planning and operation, should, for these reasons integrate the design of the fare system and fare levels in its work. Given the important social and political implications of public transport fares, it is recommended that the PTA should prepare coherent proposals which would be discussed and decided in a larger political forum.

The public transport sector will be founded on competition and will be well fitted into a modern market economy. At the same time, however, public intervention and control will secure that competition is constructive and not counterproductive. Competition should ensure efficiency and provide a user-responsive system. Competition will mainly occur on the institutional level, in the stage of competitive bidding for licenses. Competition is not intended to occur between individual vehicles on the same route since this is not improving the service to passengers. There will always be cases when competition between two or more different routes is possible since many stops and stations will be used by many routes. Although passengers will normally choose the first arriving bus, there is still an opportunity to choose a preferred company based on standard and quality of service.

The PTA will establish and manage a comprehensive data bank including detailed information of routes, operators, contracts and performance. It should conduct surveys of different kinds, continuously updating information of passenger demand and public transport ridership. It should produce information of existing passenger demand and public transport ridership (some initial steps in this direction are taken by the JICA study in Kabul²) and this should be constantly updated and upgraded through follow-up surveys. The PTA will also build up in-

² Pacific Consultants International (2003): The Urgent Rehabilitation Support Program: Rehabilitation Study of the South-Western Area & Public Transportation Study of Kabul

formation and knowledge of price elasticity and sensitivity to public transport cost levels for different strata of the population. The PTA will interact and liaise with other agencies dealing with urban transportation. Eventually, it is possible that urban transport planning functions could be coordinated and then the PTA would be included in such a coordination.

Next Steps

It is suggested that donor assistance is sought for (i) drafting of legislation to enable municipalities to set up a PTA; and (ii) to implement the PTA in Kabul. Outline TOR for study (i) is at Annex 5; the estimated cost is USD 150 000. As part of the last effort, the restructuring of the route network with the objective to put the new, donated buses into operation in a planned way that considers present and expected future needs of the city should also be undertaken. Estimated implementation time is 2 years. Cost estimates and detailed TOR are expected to come out of the JICA study³. The tentative cost is USD 2.0 million; see further Annex 4.

Recommendations

The recommendations are that

- a series of rural transport studies be carried out in order to better understand the transport situation in rural areas and to identify strategies for how to improve accessibility; TOR are in Annex 2
- in larger urban areas, the concept of a PTA be considered, and that legislation be passed to enable municipalities to establish a PTA; outline TOR in Annex 5.
- required actions are taken to enable Kabul to set up and launch a PTA, along with a restructuring the transport network; see Annex 4.

Actions

The MOT should request for donor assistance

- to carry out the rural transport studies
- to prepare and draw up the legislation to enable the establishment of PTAs
- to assist Kabul to restructure its public transport network and prepare for and launch a PTA.

³ See previous footnote.

ANNEX 1: Structure of the Afghan road passenger transport sector

1. Service structure

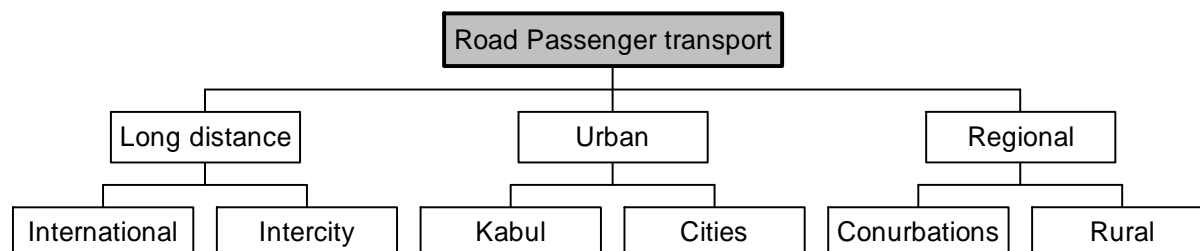


Fig A1:1 The road passenger transport sector in Afghanistan

In terms of service structure, the road passenger transport sector can be described as in fig A1:1 above. Long distance transport occurs between regions and major cities and also to neighbouring countries, such as Pakistan and Iran. The preconditions for this service have deteriorated during the last decade. Demand has been suppressed because of unrest and war and the quality of service is low because of the generally bad road conditions throughout the country. (The travel time by car between Kabul and Kandahar was 4 hours 20 years ago and is now 14 hours). Fares varies from distance to distance and types of vehicle used. For example, a passenger travelling to Mazar-I- Sharif is charged 200 Afs by bus, 300 by flying coach, 350 by Town Ace, and 600 by Corolla.

Urban transport is to be found mainly in Kabul and provincial capitals. In the period before 1992, this was a priority service, to a large extent provided by the public sector in the form of organized fixed route bus transport. Today, much of urban transport is provided by the private sector with buses and taxis. Public transport in Kabul carries about 80% of all vehicle trips.

Regional transport occurs in different forms in rural areas, for example connecting villages to local hubs or towns, and also within small conurbations. This is not confined to motorized vehicles but can take place through walking and animal drawn vehicles as well, often for very long distances. Passenger transport and goods transport must often be combined and there is not always a clear line between what is a commercial operation and not. People are travelling mainly by taxis and trucks in Pul-I Khumri and other cities of the region. Bad road condition and lack of transport facilities to some districts are major transportation problems. There are 16 truck and 10 taxi transport agencies functioning in Pul-I Khumri, 5 agencies in Takhar and Kunduz, and 6 agencies, including trucks, carrying passengers and goods in Faryab.

Fare varies from distance to distance. For example, passengers travelling from Pul-I Khumri to Kabul, Badakhshan, Takhar and Kunduz are charged between 100 – 400 Afs. In the same way, those travelling from Kunduz to Imam Sahib, Takhar, and Dashti Archi are charged between 100 to 125 Afs; from Takhar to FaizAbad, Farkhar and Rostaq between 250 and 300 Afs; from Faryab to Qaisar, Kohistan, Shirintagab, Dawlatabad and Andkhoy between 95 to 135 Afs; and from Maimana to Jawzjan, Badghis and Hirat between 100 to 450 Afs.

All of these types of passenger transport – long distance, urban and regional – use a variety of technological and organizational solutions. The most important are the bus and taxi sectors.

2. Buses

2.1 Private buses

According to official figures, there are 165 registered long-distance private bus companies; 101 based in Kabul, 64 in provinces, with a total of 14 007 buses. For Kabul itself, there are 7 bus unions with a total of some 900 buses, mostly minibuses and vans and mainly old ones. (According to another source some 2 000 buses are registered in Kabul but this does not necessarily mean that they operate there).

Union	No of buses
Mir Barak Bus	179
Ehsaan Bus	152
Saber Bus	150
Gulestan Bus	112
Shiraze Tofan Bus	19
Hamayun Bus	90
Sada Bahar Bus	200
TOTAL	902

Table A1.1 Buses in Kabul

2.2 Public buses

During times of Soviet influence, bus transport was to a large extent associated with the public sector. Today, the concept of public buses plays a significant role only in Kabul in the form of the Millie Bus Corporation and the now non-functioning trolley bus company (see Annex 3).

3. The taxi sector

The taxi system in Afghanistan is wide spread and well organised. Taxis provide all kinds of passenger transport; long distance, urban and regional trips as well as international trips between e.g. Kabul and Peshawar.

According to MOT there are 24 taxi unions registered in Kabul and 27 in provinces with a total of 29 131 vehicles. The estimated number of taxi unions in the country varies, however, from 39 (JICA) to 51 (MOT).

In Kabul, the number of active unions is at present reported to be 5 with a total number of some 4 800 taxi cars.

The real number of taxis operating in and outside Kabul is generally assumed to be much higher and figures up to 30 000 have been mentioned. The number of taxis registered in Kabul is said to be some 20 000 but this figure does not give much guidance since the area of operation may not coincide with the place of registration

Union	No of taxis
Khurshid	2 562
Aseeb	152
Abasein	15
Paghman	1 972
Sayar	98
TOTAL	4 799

Table A1.2 Taxi unions in Kabul

Taxis in Afghanistan are painted white and yellow in different patterns depending on where they operate; within a city or outside. In Kabul, taxis are also supposed to operate within operating zones indicated on the vehicle. In practise, however, these rules are not enforced and taxis can operate at will.

Unofficial taxis, without the white and yellow colour code, exist but to what extent is for natural reasons difficult to estimate. However, at least in Kabul, their number appears smaller than one would expect.

4. Intermediate vehicles

A major proportion of road passenger transport in Afghanistan is carried out not by large buses but by small and intermediate size vehicles of a variety of forms and shapes. This category ranges from small Japanese vans in the cities, to minibuses on the main roads and to powerful Russian four-wheel drive vehicles, still preferred in mountainous areas.

The type of three-wheeler passenger vehicles well-known in e.g. Pakistan, India and Thailand, (“auto-rickshaws”, “tuk-tuks”, etc) exist in some Afghan cities but usually not in large numbers. In Kabul, auto-rickshaws are few and limited to one or two areas.

ANNEX 2: Terms of Reference for a Country Study of Rural Transport Services

This annex provides generic terms of reference for a study on rural transport services and intermediate means of transport⁴. The details should be adjusted to the circumstances of the country or area studied.

Background

These terms of reference focus on a survey of rural mobility in a particular country or region with the aim of developing a strategy or interventions to improve rural transport services. They set out a situation analysis, including the actual use of and the assessed demand for rural transport, try to identify constraints to the provision of rural transport solutions, and develop a strategy to mitigate these constraints in order to promote affordable transport solutions for the rural poor. The survey should address the whole range of transport provision relevant to the area, including motorized and non-motorized means as well as transport services and private transport.

Country Context

The lack of rural transport solutions is frequently identified as a major constraint to rural development. Transport services and infrastructure are often poor or lacking, and planners generally have not taken an integrated approach to the problem. They have traditionally focused on improvements to transport infrastructure, usually roads, as the principal remedy, on the assumption that private initiative would respond to the resultant demand for mobility. However, there are often problems that impede the development of this private initiative, so the supply and quality of transport services are unsatisfactory. Evidence from development projects funded by the World Bank and other donors shows that good roads do not necessarily mean good transport services. Indeed, it is common to see good quality roads used mainly by pedestrian and non-motorized means of transport in developing countries.

Government policy and regulation of the market for transport services as well as transport associations and unions might impede the provision of rural transport services. Often an urban-rural imbalance can be observed. Queuing for loads at truck parks on certain urban or interurban routes with a scarcity of services on rural routes is common. As government interventions in transport services have declined, private cartels have sometimes taken their place, creating significant distortions in transport markets. This combined with other factors leads to three or five times higher transport charges in Africa than in Asia. Lower charges would increase the effective demand for transport services from rural communities.

Private transport services such as bicycles, carts, animals, and motorbikes are often underused by the rural poor and the most vulnerable, including women, who, in many parts of the world, have the main responsibility for transporting goods. Use is limited partly by socio-cultural factors, high costs, and lack of supply, maintenance, and spare parts in rural areas. Lowering taxes on transport vehicles has been shown to increase the number of vehicles, while promotional efforts such as credit, awareness raising, and training have increased their use.

⁴ From World Bank Technical Paper No 525 "Improving Rural Mobility". Reprinted with the permission of the World Bank. To be adapted to Afghan conditions

Objective of the Study

The principal objective of the study is to identify the problems in rural mobility in a country or a region that are hindering development and to develop a strategy that can alleviate these problems. The study will be used by policymakers, task managers, program officers, community planners, and non-governmental organizations (NGOs) to enhance the provision of transport services. The situation in the area should be outlined and a plan of action described that details who is responsible, the proposed timeframe, and potential pitfalls.

Scope of Work

The Study will survey the current situation in rural mobility, transport services, and means of transport within and outside the specific region or country to draw lessons from similar cases. The study should consider different transport solutions based on conditions and potentials and should integrate transport services and infrastructure, though the interventions should focus on the means of transport. Due to various standards of roads and population density on a specific route, the study must also consider the linkages between motorized and non-motorized transport. The study should present the rationale and justification for improving rural mobility and review its contribution to the objectives of increasing agricultural productivity and rural welfare and to facilitating access to economic and social services.

The report could be divided into three sections. The first would examine the existing situation to increase the understanding of prevailing conditions of use, supply, and demand in rural transport, means of transport available, laws and regulations, tradition and culture, and so on. The second section would highlight the constraints and problems in the provision and use of rural transport. The third section would outline a strategy for undertaking programs and activities to promote and develop rural mobility. The strategy should identify and address the players who can contribute to the development of transport services, such as communities, government, operators, manufacturers, donors, institutions, and NGOs. A number of issues should be addressed under each section; the major ones are mentioned below.

Part 1 Situation Analysis: The Nature of Rural Mobility (Means of Transport and Infrastructure)

This part is an assessment of the variety of transport services in the area and people's access to these and the existing and planned road infrastructure (including larger roads as well as smaller paths and footbridges) and responsibilities for construction and maintaining it.

- Assess access to facilities and the needs and preferences for transport solutions
- Identify transport users. Assess demand patterns and any seasonal variations.
- Describe gender and cultural conditions affecting transport needs and usage.
- Analyze affordability and economical options for transport services (income and distribution, available credits and subsidies to purchase vehicles or use services (income and distribution, available credits and subsidies to purchase vehicles or use services, cost of vehicles, spare parts, maintenance and services, ownership, and so on).
- Assess community awareness and capacity for transport options and potential.
- Review the process of identification, planning, and initiation of transport services; participation of communities and the public and private sectors; involvement of donors, NGOs, and government departments; and impact of policies affecting the sector. Identify stakeholders and their roles.
- Describe the organization of rural transport services by identifying stakeholders, users, operators, cartels, regulatory authorities, and the management of rural transport services.

- Describe the legal framework for the transport sector (such as taxes and duties on vehicles and services).
- Review the rural transport policy (if any) and its implementation.
- Assess the economic efficiency and profitability of transport services including transport costs, vehicle operating costs, and socioeconomic disadvantages or benefits of existing transport options.
- Describe the supply, after-sales services, and maintenance facilities available for the transport sector. ‘
- Analyze safety and environmental problems related to existing transport solutions.
- Study other options to improve accessibility, such as rural markets, health clinics, and other facilities.

Part 2 Problem Analysis: Analyze Problems Related to the Existing Transport Situation

- Access to transport services.
- Affordability and economical options.
- Gender and cultural hindrances.
- Community’s degree of empowerment and participation in local government planning.
- Local and national awareness of transport options.
- Local initiatives.
- Transport operations.
- Reasons for lack of services and vehicles, road infrastructure, affordability and critical mass.
- Supplies of vehicles and spare parts and characteristics of the marketing systems.
- Lack of unfavourable laws and regulations.
- Institutional arrangements and involvement of stakeholders in decision-making.
- Rural markets, access to facilities, infrastructure type and condition.
- Safety and environmental problems.

Part 3 Recommendations: Proposed Strategy for Improving Availability of Transport Means and Services

Promotion of Private Ownership of Means of Transport

- Outline options for appropriate rural transport services and show how complementarity and diversity can improve rural mobility.
- Provide guidance on appropriate spending for transport services in relation to people served, tonnage handled, increased income from sales, and so on. Consider economical options to enhance affordability and use of transport among the poor (including credit, subsidies, taxes and duties).
- Propose ways to adopt participatory planning and empowerment and explain the benefits.
- Propose ways to enhance human capacity and awareness and to stimulate local initiatives.
- Propose interventions to address gender and cultural obstacles to make transport available to those in need.

Promotion of Transport Services

- Consider ways to improve the supply and distribution of vehicles and maintenance.
- Consider ways to improve effective demand.
- Outline options for improving safety and environmental conditions.
- Consider economical options to promote transport use (credit, subsidies, taxes, duties).

- Outline options for institutional arrangements and stakeholder involvement.

Other Options

- Consider alternative ways to improve access (rural markets, relocation of facilities, provision of infrastructure).

Estimated Consultant's Input

The Consultant's first task will be to draw up an initiating memorandum detailing the questions to be examined, the work methodology, and work schedule. The memorandum will be discussed and agreed before the beginning of the study. It is expected that the study will require a total of [insert variable] person-weeks. The team should include a transport economist, rural transport specialist and social scientist.

The consultant will report to [insert client's name]. The consultant will present the initiating memorandum to the client and the task team leader before starting the substantive part of the work. The preliminary and final reports will be reviewed by the client and the task team leader. Comments will also be sought from professionals and institutions with experience in transport, planning, and rural development.

Reporting Requirements

A preliminary report will be produced one month after commencement of the study. A draft report should be produced two weeks after completion of the services. The final report must be provided two weeks after reception of feedback. The consultant will produce [insert variable] copies of each report as well as a diskette of the final report.

Cost Estimate for Three Rural studies

Three different studies are considered. In addition to the study teams themselves (that could be from different consultancies and even perhaps from different donor countries), it is suggested that one consultant be engaged to assist the Government in the initiation, monitoring, evaluation and interpretation of the results of the three studies. This consultant would also assist in transforming the results of the studies into recommended actions.

Each of the study teams would include a transport economist, a rural transport specialist and a social scientist, and each study would be undertaken during a period of three months. Local staff would be required in the form of interpreters and translators for the various languages in question, as well as for assistance in travel arrangements, undertaking of interviews, etc. It is recommended that the teams include both men and women in order to be able to interview all parts of the population and thus get a full perspective of the problem. Given the conservative values and attitudes that can be expected in many rural areas, it would be to the advantage if experts from Islamic countries could be involved.

A tentative budget would be as follows:

Foreign consultants

Study teams	27 man-months @ USD 15 000	405 500
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Monitoring consultant	3 man-months @ USD 20 000	60 000
<u>Local staff</u>		
For study teams	27 man-months @ USD 1 500	40 550
For monitoring consultant	6 man-months @ USD 1 500	9 000
<u>Expenses</u>		
International travel	15 trips @ USD 1 500	22 500
Local travel	40 domestic trips @ USD 200	8 000
Accommodation	900 days @ USD 150	135 000
Misc		79 450
TOTAL		400 000

At this stage, it might be practical to assume a total requirement of 500 000 USD.

ANNEX 3: Development of urban public transport in Kabul

1. Background

Kabul is not Afghanistan but it is the largest city and many of the issues and problems facing Kabul are, or will be, relevant also for other cities. Government control can be expected to be highest in Kabul and therefore chances would also be the best there for a successful implementation of desirable and trendsetting policies. One of the key issues in passenger transport in the country – the future policy of Millie Bus – Bus is particularly intertwined with the situation in Kabul. For these reasons, (and also, frankly, because data and information on Kabul were more accessible than for other cities during the time of the study), some emphasis will be laid on the development of a public transport system in Kabul.

2. Issues in Kabul

Many different issues are now facing Kabul and, to varying extent, also other cities in Afghanistan. There is an immediate situation to solve but there is also a need for careful consideration of how actions now taken (or not taken) will set the scene for the future – sometimes irreversibly.

2.1 Lack of transport capacity

The first and fundamental task for the system is to be able to offer sufficient capacity to satisfy the travel demand of the public. For many reasons this demand can be expected to rise sharply in the near future. With normalisation and economic development, the need for work and school trips will increase. The return of women to employment and of girls to schools will work in the same direction.

It has been estimated that about one million people will return to Afghanistan from neighbouring countries, basically Pakistan, and that most of them will go to Kabul. This will further increase the demand in the short term. (When, after the first Gulf War, some 400 000 Palestinians were forced to leave the Gulf states and go to Amman, a transport crisis occurred).

The capacity of the present public transport system is insufficient, based as it is on taxis, minibuses (mostly old) and a few standard buses. For this reason, the expected influx of some 500 buses to Kabul is urgent and needed.

2.2 Congestion

Kabul has a limited road network and traffic congestion is already occurring in many areas. Additional road capacity would be needed in the form of widened and new urban roads. Such schemes should go hand in hand with traffic management actions in order to maximise efficiency in the use of available road capacity.

Also in this context, the public transport system has a role to play. A well planned public transport system based on high capacity vehicles could alleviate congestion if it can replace many smaller vehicles.

2.3 Air pollution

The air quality in Kabul is clearly unsatisfactory and is likely to become worse as traffic increases. The major problem is likely to be low quality in both fuel and engines. It is not known whether any recent measurements have been made; if not, it is recommended that a first set of air quality measurements be made soon.



Fig A3.1 Air pollution in Kabul

Since public transport forms a large proportion of motorised trips in Kabul and will continue to do so, it is obvious that the public transport system has a role to play in the attempts to reduce harmful exhaust emissions. Modern European buses are practically non-polluting but are costly. Other technologies such as electrical propulsion (for example trolleybuses, see below) or gas buses are available but at even higher costs.

In Europe, people are often encouraged to use public transport instead of cars in order to improve environment. In a city like Kabul, however, a more relevant strategy would be to promote a system based on few high-capacity vehicles rather than many small vehicles. This is one argument in favour of the “fleet operation concept” (see 3.5).

2.4 Accessibility

In a metropolis like Kabul, accessibility to all parts of the city is an important issue. People can, however, lack access to the public transport system for many reasons. Some areas are physically isolated due to the lack of roads; others because mountainous conditions that make them unattractive for transport operators. Also, considerable groups of people lack the financial resources to use even the cheapest mode of transport and are confined to walking. To create conditions for mobility of people is a responsibility and a challenge for city authorities.

2.5 Employment

One of the aspects of the public transport system that should not be overlooked is the fact that it provides employment. The type of transport system that is least efficient from the point of view of use of road capacity and environment is also the one providing most employment and this is a conflict that often generates political problems.

2.6 Financing

A transport system must be paid for either by the users or by the society as a whole. Cities that have left their entire transport system to the private sector to solve by market forces may encounter many disadvantages but at least this approach eliminates a potential financial burden. If a city wants a more sophisticated system, then it must be made clear how and by whom it will be paid for.

2.7 Interaction with urban planning

The urban transport system has a considerable potential to shape urban development. This can be used as a tool but it can also be a limitation. It may, for example, be non-constructive to locate a market area to a place where preconditions for public transport accessibility is lacking.

2.8 Role of women

The improvement of the role of women is a priority in today's Kabul and the public transport system is one of the areas involved, including issues such as:

- treatment of women in buses and on bus and minibus stops
- accessibility issues – shopping, children, school transport
- work – better accessibility and mobility could increase the opportunities for active participation in employment.

Sometimes ambitions are in conflict. To provide special buses (or compartments in buses) for women does improve the situation for many and would be implement able since it is in line with local customs. However, at the same time, this policy of special treatment contributes to the isolation of women in the long run.

2.9 Buses arriving – a fait accompli

A factor that must be taken into account in the planning of the public transport system for Kabul is that some of the strategy decisions have already been taken. With donated buses now coming, the city must adapt its policies to make the best possible use of them. This calls for the policy of a regulated, organised bus system of the “fleet operation” type.

3. **Recommended route network and service structure**

3.1 Route network design – a trunk line/feeder line system

As buses are now coming, it may seem natural to want to re-establish the previous system based on of 55 routes that covered 532 km in the city. However, the opportunity to redesign

and optimize the route network should be taken before all the buses are definitely put in traffic. A Japanese funded urban transport study is at present (spring 2003) ongoing in Kabul and before a new route network is firmly implemented the results should be considered.

It is important that the route network structure take into consideration not only the new buses but also other modes, especially minibuses, that may have an important role to play. The most logical structure in the situation of Kabul would seem to be to implement a trunk line/feeder line system. The new, relatively high-capacity buses would function as the backbone of the system, much like a subway in some cities, and would be complemented by smaller vehicles.

The overall strategy for the medium and long term should be to secure the advantage of an integrated and coordinated system that, in the best cases, characterized the classical European model, but with private sector involvement. Initially, the public sector (Millie Bus) could operate the trunk line part of the system and the private sector mainly act as feeders while later on (see chapter 5) competition would be gradually introduced also in the trunk line network. It must be strongly emphasized, however, that such a strategy requires firm regulation and planning. International experience shows that in a deregulated system the private sector will primarily wish to operate the main corridors with minibuses in a non-constructive competition with the big buses.

In an integrated system, routes of different types complement each other and connect at transfer points. The general feeder line/trunk line concept can in some cases be modified in order to reduce the need for transfer, e.g. by having feasible feeder buses continue as express buses on high-speed sections. The entire route network should be carefully planned with the help of modern techniques, in order to optimise travel standard and service levels to the lowest possible costs. Using frequent upgrading of travel demand data as input, modifications of network and services should be constantly made as the city grows and changes character.

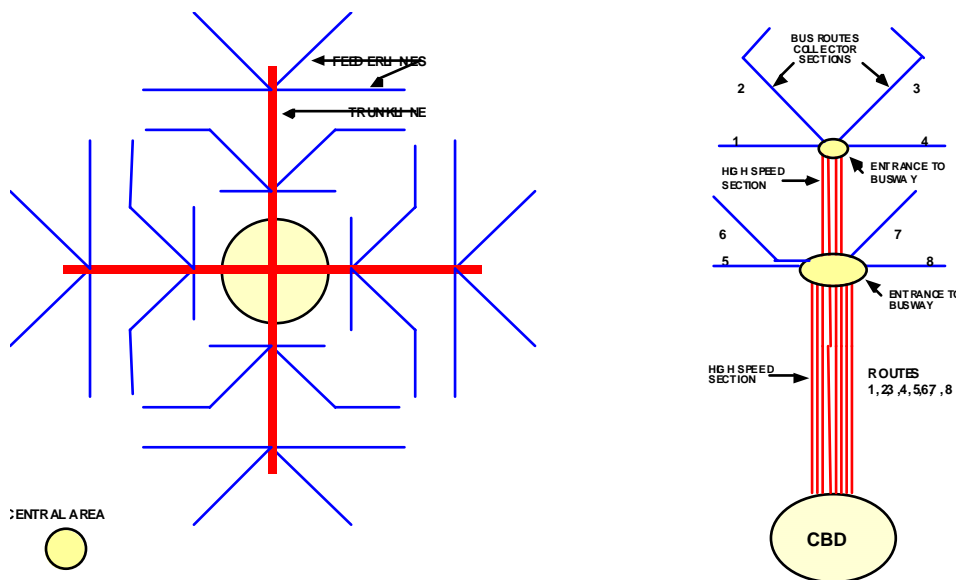


Fig A3.2 Feeder/trunk line system and Feeder/express concept

3.2 Stops and terminals

In many cities in developing countries, the concept of designated bus stops has been abandoned in favour of a system where private minibuses stop for boarding and alighting everywhere. This is often encouraged by one group of advisors that argues that the market will produce the best solution. This is a policy that is most suitable for small vehicles in the “individual operations concept” and that will contribute to their out-competing of the big buses.

If, as appears to be the case, Kabul wishes to establish a conventional type of public transport based on buses, then bus stops should be established and they should be the only places for boarding and alighting of public transport.

In the previous system Kabul had 426 bus stops but today most of them need to be upgraded. Also, as is the case with the bus routes themselves, the location of bus stops need not necessarily be identical with the old system. Kabul is now in the process of change because of migration but also because of the establishment of a free market economy that (hopefully) will characterize the city in the future. In this situation, new areas for public transport demand may emerge that were not served in the old route network and stop configuration.

During the time when the availability of public buses was very low, taxis and minibuses have established new pick-up areas, often adjacent to market areas. Since private minibuses tend to apply the “fill and run” principle, they often wait for passengers in these areas. It is recommended that these patterns are carefully studied and used in the process of planning the locations for bus stops. However, the recommended principle for large buses is not “fill and run” but a system where the buses are constantly moving and only stop a short while at bus stops. This principle greatly reduces the need for land and should be considered in the planning of bus stops.

The system includes a number of strategically located bus terminals. These provide transfer possibilities between feeder lines and trunk lines and they also are connected by a system of direct routes, providing fast access between them. Due to their high accessibility, these transportation hubs can develop into local service centres and are ideal for different types of businesses as well as official services. This contributes to decentralisation and reduces travel demand to the city centre

3.3 Designated road space

A transport system consists not only of vehicles but, as importantly, on infrastructure as well. Advanced buses should not be put in use on congested roads where they cannot move - the commercial speed is one of the most decisive factors in order to achieve high economic efficiency. When, however, buses are given proper road and street infrastructure where disturbances from other traffic is eliminated or reduced, then this leads to superior economy and high standard at the same time.

The need to carefully plan the use of road and street infrastructure so that public transport can become efficient and attractive was perhaps not so great in previous times when private transport was rare and traffic congestion unusual. But in the future, Kabul will almost certainly experience the same problems as many other cities. Traffic congestion will increase and public transport will be caught in an evil spiral; the slower it gets the more expensive it becomes

and the more subsidies are required. At the same time service levels in public transport levels deteriorate.

In Kabul today, according to the JICA study, public transport accounts for more than 80% of all vehicle trips. Since public transport undertaken in high-capacity buses is the most efficient form of transport from the point of view of road space and environment, it should be given priority. Some of the most successful cities as far as public transport is concerned (for example in Brazil) have introduced schemes where a few percent of the street space is reserved for the majority of people that uses public transport. If Kabul wishes to investigate that possibility, however, it is recommended that it is done as soon as possible. Once a bus lane is established it is not disputed but in a situation with heavy traffic congestion it will become politically difficult to redistribute street space.

Busways

A busway is a road exclusively used by buses and separated from all conflicts with other traffic. Its geometric design should permit bus operation at high speed, but at difficult sections it is less geometrically demanding (slopes and curves) than metro or light rail. The busway can be situated at ground level, on overpasses and in underpasses, and can also be elevated at narrow sections.

Bus lanes

Bus lanes can be of different types as well, e.g.

- Kerb side lanes
- Median lanes
- Contra flow lanes

The kerb side lane is the most common type because it is easy to implement. It can be single or double, with or without bus bays. It should be physically separated from other traffic by specially designed kerb stones rather than be marked by a painted line only.

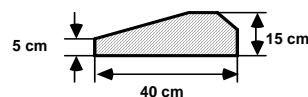


Fig A3.3 Kerb stone separating a bus lane

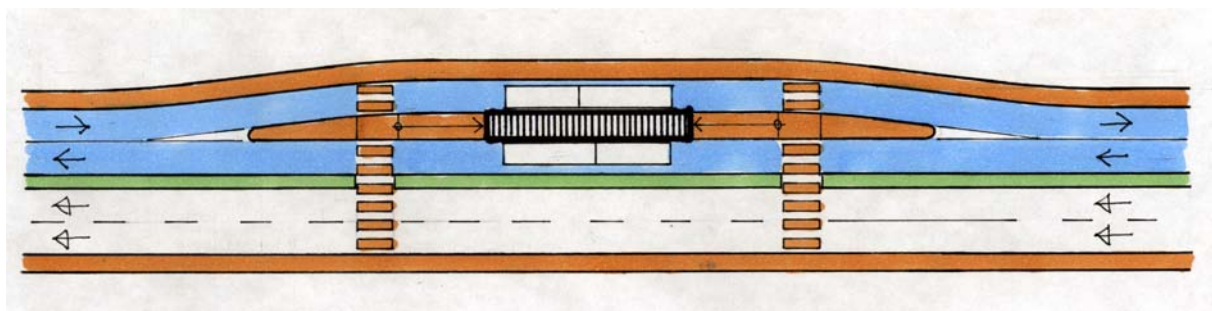


Fig A3.4 Two-way bus lane at the side of the road

Mid-road bus lanes

Where adequate road width is available the bus lanes can be located in the centre of the road for the following reasons:

- Free accessibility to the block sides for other traffic.
- No disturbances from parked vehicles
- Bus priority at traffic signals is facilitated.
- Physical separation from other traffic is natural.
- Higher operating speed than for kerb side lanes.
- No conflicts with left turning vehicles at intersections.

Fig A3.5 below shows one example of a mid-road bus lane design.

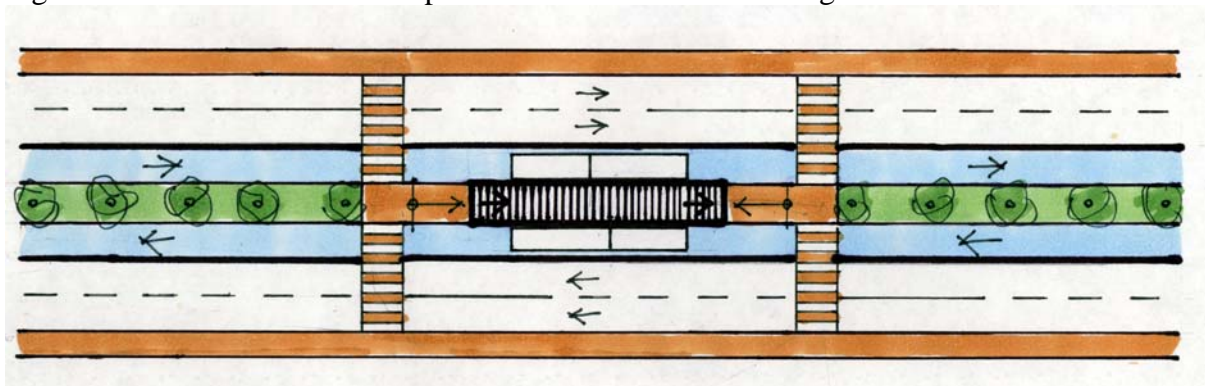


Fig A3.5 Mid-road bus lanes

In one way streets contra flow bus lanes could be physically separated from the other traffic, for traffic safety reasons and to keep the other traffic from using the bus lane for right turning.

Coordination with traffic planning

In addition to providing the sections shown above, other actions can be taken in the general traffic situation. For example crossings with roads with a bus lane should be eliminated as far as possible e.g. by introducing more U-turn roads and by fencing. In some cases, traffic lights can be designed to give priority to buses. Traffic zones may be considered as in European cities, providing priority to public transport but reducing individual traffic crossing of sensitive areas.

The introduction of busways and bus lanes will of course affect other traffic in different ways. There may be less capacity for other road users on certain sections; on the other hand buses will be taken from some streets to be concentrated to their own corridors and this may improve conditions for other traffic. Planning of busways must under all circumstances be done with due consideration to other traffic and with a view to optimise the total traffic system. The fact that such coordination becomes necessary in the case of surface-based public transport system is in fact an advantage for a city since it forces through a development of the complete traffic system which is necessary anyway. The illusion that an underground or elevated rail system would somehow have an automatic effect on the general traffic situation can be avoided that way.

Stepwise development

Due to the unique flexibility of the bus concept, buses can use ordinary streets as long as separate busways or lanes are not available. Contrary to a rail system, the infrastructure does not have to be contiguous and complete already from the beginning. This means that an advanced bus system can be introduced even though all infrastructure problems may not yet be solved, and gradually, over time, the system can be improved. Once road and street infrastructure for bus transport has been secured, the potential exists for a possible conversion to another mode of transport if this should be desired sometime in the future.

It should be noted that a network of undisturbed roads and lanes can be very useful also for other purposes than bus transport, for example for emergency vehicles like police, ambulances and fire brigades.

3.4 Rolling stock

Kabul is in the process of receiving a fleet of buses from different donor countries. According to available information, 600 buses will come from India, 50 from Iran and 111 from Japan. Detailed specifications have not been studied, but it appears probable that the buses from Iran (of French design) and Japan would have a modern basic design. All are urban buses and should be suitable for Kabul.

Of the 561 buses to be supplied, it is reported that some 480 will be put in service on public routes in Kabul. This will be a considerable increase from the lowest mark of some 50 buses. However, it should be noted that in 1990 Kabul had 860 Millie Buses plus 80 trolleybuses for a population then amounting to some 2,2 million.

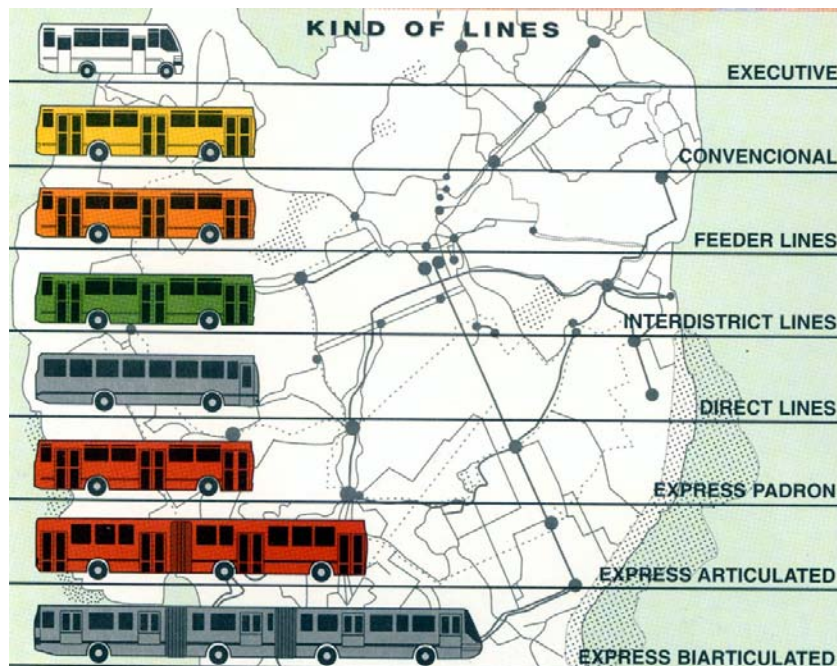


Fig A3.6 Bus types and routes in the Curitiba system

In an integrated system, the bus fleet should be composed of different types of buses for different purposes (see fig A3.6) although the number of basic designs can be limited. For corridors with especially high demand, high-capacity buses should ideally be used, and when feasible conditions have been developed, articulated buses may become an option. It should be noted that the level of bus technology is related to the intended level of the system itself. Thus, modern buses will be most cost-efficient in a feasible environment, notably when mobility and high commercial speed is ensured.

4. Public Transport Authority

A Public Transport Authority is proposed to be established along the lines described in chapter 4. A discussion of location and timing is provided in section 5.4 below.

5. The trolleybus system

5.1 Background

As early as 1929, German engineers built the first trolleybus line in Kabul. In the 1970:s it was modernized by Russian technology and the system eventually encompassed about 5 km. The rolling stock consisted of 80 Skoda trolleybuses from Czechoslovakia. The Czechs also provided technical assistance for the establishment of a large depot in the Khushal Khan area. The system had three full routes which, in some narrow streets, were one-way.

The three lines formed a long single line, but transferring was required between each line. The transfers were not free--a new fare had to be paid. In effect, there were three zones.

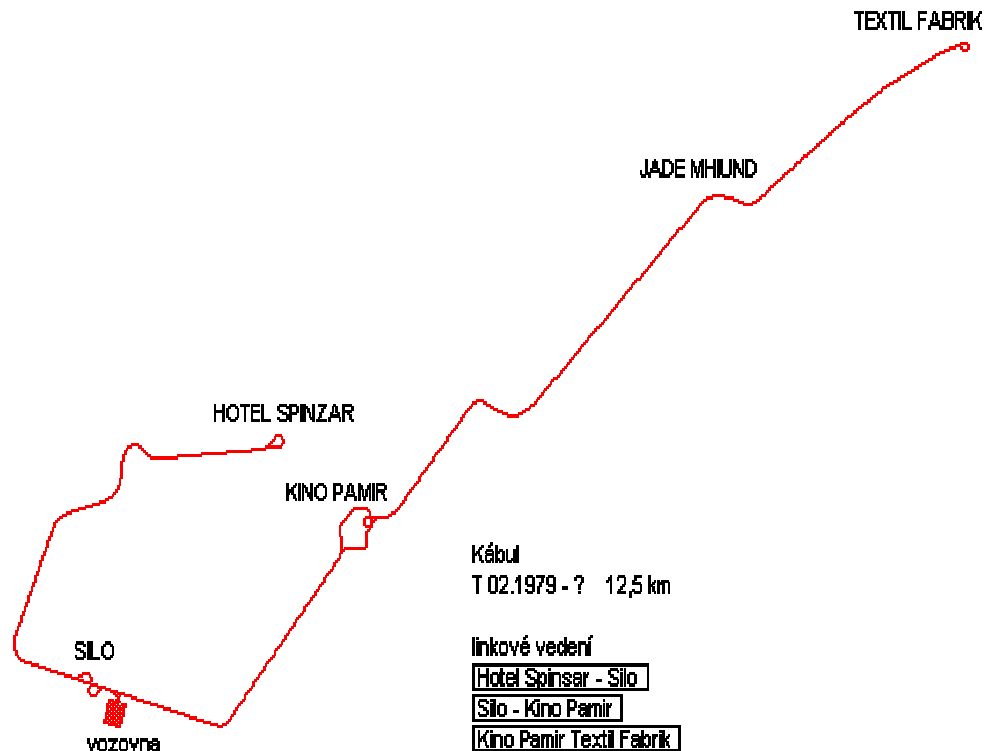


Fig A3.7 The trolleybus system in Kabul⁵

During the hostilities, the rolling stock and the electrical supply system were completely destroyed with only some poles supporting the air cables still standing along the roadside. The depot area itself is more or less intact as well as some of the buildings, although considerable work is needed to dispose of broken down and destroyed vehicles and other scrap.

The trolleybus organization still has 100 employees, most of them technical staff specialised in trolleybus maintenance and electrical supply.

Prospects for the future – should the trolleybus system be restored?

In its day, the trolleybus technology worked and served the city well, although it was always on a limited scale. It is only natural that the idea of restoring the former trolleybus lines should be raised in Kabul as one part of the reconstruction of the city. Many people may see it as a symbolic link to an organized past.

A trolleybus system is based on large vehicles in fleet operation. Technically speaking, therefore, it would fit into the recommended structure of a trunk line/feeder line network for Kabul. Also, the non-polluting electrical propulsion is certainly favourable from an environmental point of view.

However, there are a number of aspects that have to be taken into consideration.

⁵ Source: Electric Trolleybus Homepage (<http://members.shaw.ca/dearmond/index.htm>)

- A trolleybus system is much less flexible than a regular bus system but does not have the structuring effects that for example a rail based system can have.
- The dependence on regular electrical supply makes the system sensitive for disturbances (it is reported that the depot area itself has not had regular electricity supply for several years).
- A trolleybus system is almost certain to be more expensive than a regular bus system – it will require more subsidies without the corresponding benefits in service levels.
- There are few suppliers of trolleybuses in the world market and since the market is small prices are high. Western manufacturers, for example, are likely to charge 60% more for a trolleybus than for a similar diesel bus and to this has to be added considerable investments in infrastructure.
- In the 1970:s, the trolleybus system operated in an environment with little traffic, something which kept operating costs reasonable. This is no longer the case.
- If money is available for reducing air pollution, then other solutions, such as modern, practically non-polluting diesel buses or gas propulsion, would be more cost-effective
- The only real advantage of a trolleybus system in comparison with a regular bus system would be to serve very hilly areas. This is something that could be investigated but it is not certain if this argument is enough.

Perhaps the most serious consideration, however, is not so much technical as it is institutional and structural. It is almost inevitable that a revival of the trolleybus system would have to go hand in hand with the re-establishment of a monopoly public sector company. All experience shows that it is far more difficult to reform a transport company with infrastructure (rail or electrical support system) than a regular bus company. In Gothenburg, Sweden, for example, the former public transport monopoly was successfully reformed on the bus side while the tramway system still has not been able to break away from the public sector. The same is true in e.g. St Petersburg, Russia where the company Gorelektrotrans (operating trams and trolleybuses) is all but unchanged since command economy times. While there is a possible strategy to reform Millie Bus (see chapter 5 below) the re-establishment of the trolleybus system would be an all but irreversible step back.

5.2 Recommendation regarding trolleybus

Based on the reasoning above, the conclusion must be that the re-establishment of the trolleybus system in Kabul is not a priority at the moment. (In fact, the challenge to create an efficient and modern system based on regular buses operated by Millie Bus may be demanding enough). The recommendation, therefore, is to remove the remaining power poles and the destroyed buses, and to consider how the depot area could be best used for other purposes.

6. **The private sector**

Even though Millie Bus will be strengthened with the influx of new buses, it will hardly be able to cater for all transport needs in Kabul. The private sector will be there and the challenge is to find a constructive balance between the two all but incompatible concepts (see fig 1) that will exist in Kabul. It should be acknowledged from the beginning that this is no easy task.

6.1 Minibus

The most serious conflict is between the minibus and the bus. Many cities have attempted to achieve a “peaceful coexistence” between a government bus system and a private minibus sector. Often, minibuses are invited to operate because of insufficient capacity or low service levels in the bus sector. Minibuses are then seen as a valuable complement to the big buses; feasible for operation in less accessible areas and as feeders to the large buses.

However, in a “free” market situation, a deregulated minibus sector will prefer to operate where the large passenger flows are. The result is that the private minibuses will often out-compete the buses along their routes and take over the profitable part of the business while the government bus company is left with the ungrateful task to uphold a costly social service with big buses (see fig A3.8 below).

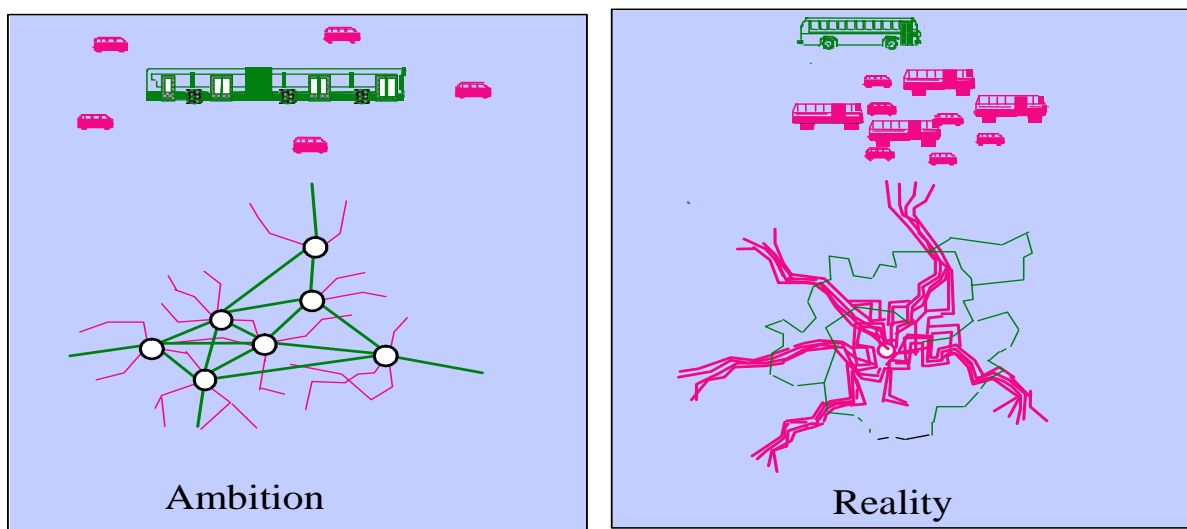


Fig A3.8 Failed coordination between different public transport concepts

If Kabul intends to base its public transport system on high-capacity buses, therefore, a regulation mechanism is needed through which the right to operate various routes in the city is regulated. This would be done by the PTA (see Section 5 in Consultation Paper 1.6).

Taxi

Taxis dominate the streets of Kabul today and the two quotes below illustrate the situation.

“Since the transportation system has been destroyed, many Kabul citizens now use taxis. They share a taxi and, culturally, you know it is difficult for women to share a taxi with men. It is also very expensive. A few buses are still working in the city but they are very old and far from adequate in number”. (UN press briefing in Kabul 24 Nov 2001)

"There were 3,000 taxis in Kabul a year ago; now there are 30,000. Everyone wants to buy a car, but no one has a driver's license, and the traffic signals don't work," groaned Lal Mohammed, a policeman frantically waving and whistling at a choked intersection last week. "I love to see people back in the streets, but this peace and stability also bring more problems every day.

(Source: Kabul basks in freedom, but suffers growth pains. Sunday, November 24, 2002 By Pamela Constable, The Washington Post).

It appears evident that the taxi sector today is *de facto* deregulated although there is a regulatory framework supposedly in force. In a recently liberated economy and in the absence of a capacity-strong public transport system, many actors (some drivers, some risk-taking investors) entered the taxi business in the hope of easy money. Many of them may now become losers as a newly strengthened bus system takes market shares - but this is of course part of the preconditions and risks in a market economy.

In most parts of the world, an individual taxi journey is a luxury and this is not too much different in Kabul. A taxi trip offers high standard but will always be more expensive than a bus trip. Besides, it is evident from a technical/economical point of view that a mass transit system in a large city is not best provided by passenger cars.

The argument that often emerges in a discussion of high-capacity versus low-capacity mass transit systems is the one of employment. Taxis will certainly employ more people than buses (and rickshaws would employ even more) but it is questionable if a transport policy should be based on that aspect.

The difference between taxis and minibuses in the context of Kabul is that taxis are not a direct competitor to the intended bus system. Not route-bound, it is a different kind of system than the bus system and therefore there is less need for regulation than in the case of minibuses. The recommendation is to include the taxi sector under the jurisdiction of the proposed PTA but to continue the policy of allowing people to enter the taxi industry relatively freely and to impose regulations mainly as regards the safety of vehicles, the suitability of drivers and perhaps the avoiding of overcharging. As now seems to be the case, the business would then regulate itself.

6.2 Autorickshaw

The autorickshaw plays a very limited role in Kabul although it is frequent in other cities such as Kandahar. In its function, this mode is similar to the taxi and could be treated much the same. However, the poor environmental characteristics of the autorickshaw must be taken into account. Not only are engines sometimes bad (worst are the two-stroke engines now banned in e.g. India but still exported) but the way of operation is such that the driver, looking for customers, produces a higher amount of emissions per passenger-km than most other modes.

7. **Fares and financing**

According to a recent survey, 49% of trips made in Kabul are by bus. Out of these, 85% of the passengers stated that they use the bus because it is less expensive. On the other hand, people using taxis did so because of the better availability and higher comfort. This demonstrates that the fare level is an important issue.

It has been observed that the recent increase of Millie Bus operations in Kabul has had the effect of reducing the price of trips made by taxis and private minibuses. If this is true, it could be interpreted in different ways. Some would say that government intervention has distorted prices, thereby damaging private enterprise. Others would say that the initiative has

protected the population from excessive prices and therefore has had a positive effect from a social point of view.

To provide low fares within the Millie Bus network will certainly have positive effects on the population since the availability to various city functions will increase. However, it has to be recognized that there is a trade-off between fare levels and financial sustainability.

Three different strategies can be considered:

1. The fare level is high enough to pay for the buses and their operation.
2. The fares do not cover the depreciation and capital costs of the buses but covers all costs for operations during the lifetime of the buses, including spare parts.
3. The fares are kept deliberately low and do not even fully cover the costs of operation.

Strategy and effect	Fare revenues cover	
	Bus cost	capital Operation cost
Strategy 1: High sustainability, low social impact	X	X
Strategy 2: Limited sustainability, high social impact		X
Strategy 3: Non-sustainable, high risk		

Table A3.1 Financing strategies

The first strategy means that the system is fully sustainable since it generates enough funds to run the buses and also to renew the bus fleet. Hence, there would be no need for subsidies from the public sector. This is of course a desirable situation but unless the system is very efficiently run, fares would probably need to be rather high and this would be high political price to pay. To introduce, at this point in time, a fully sustainable system appears to be an unrealistic ambition.

The third strategy is frequently occurring in many cities around the world where fares are kept very low for political reasons. Since fares are not even sufficient to cover costs of operation, the bus operator is dependent on a continuous flow of subsidies. Unfortunately, experience shows that such subsidies tend to become ad hoc and unreliable. The effect is usually that the company struggles to pay salaries and fuel but has no money to buy spare parts and provide the necessary preventive maintenance. This results in cannibalizing of buses and a waste of capital. If a strategy is to be based entirely on subsidies, then this has to be systemized, for example by assigning a part of vehicle tax to the bus system. This appears far too complicated at present and the strategy is not recommended.

In the situation that Kabul finds itself in today, the second strategy is probably the most constructive one. The buses that are about to come have been donated to the country and it is reasonable that their nominal cost will not have to be recovered by fares. Fares should, however, be adapted so that they cover operating costs and particularly spare parts which is crucial. If this principle is applied, then subsidies will not be needed until next time buses are required.

It could still happen that some categories of the population find fares too high and need help to have access to the system. If so, the bus operator should not be required to transport them for free or for too low fares. Instead, support should be directed directly to the people in question, for example by designing schemes in which they are given bus tickets that can be recovered by the operator.

8. Summary of recommendation

The recommended strategy is to apply a supply-leading approach based on Millie Bus. Large buses will operate as trunk lines on major corridors and fulfil the same role as for example a subway would do. A feasible route network with a number of terminals will be developed.

It is suggested that donor assistance is sought for the restructuring of the route network with the objective to put the new, donated buses into operation in a planned way that considers present and expected future needs of the city. Estimated implementation time is 2 years. The outcome would be a consistent route network and operating plan that allows for the gradual introduction of new, donated buses as they arrive. A trunk line – feeder line network with a role for the private sector. Development of feasible depots (preferably 8-10), a separate Head Office and a separate workshop as a step in the decentralization of Millie Bus with a view to a future privatization. Initiation of measures to secure mobility of the buses in traffic. Special consideration to gender aspects; in particular possibilities to offer women safe transport to school and work. Also, introduction of women bus drivers as a symbolic and policy setting gesture.

Cost estimates are expected to come out of the JICA study⁶. Tentatively 2 M USD

⁶ Pacific Consultants International (2003): The Urgent Rehabilitation Support Program: Rehabilitation Study of the South-Western Area & Public Transportation Study of Kabul

ANNEX 4: Public Transport Authority - Basis for Legal Drafting

The following is not a proposed legislative text but intended as an example and as a basis for a legal draft to be produced by legal experts after discussions and approval of the role of the PTA

PUBLIC TRANSPORT AUTHORITY FOR THE GREATER KABUL AREA

Section 1 (Preamble)

§1. This Chapter defines the establishment, the functions and powers and the possible extensions of a Public Transport Authority (PTA) for the Greater Kabul Area.

§2. This Chapter replaces previous legislation falling within the area of authority of the PTA. Such parts of existing legislation that may be in conflict with this Chapter are hereby declared invalid. In particular, the authority of any other authority to issue licenses for public transport services in the area is hereby abolished.

Section 2 (The Mission and Power of PTA)

§3. The Public Transport Authority (PTA) for the Greater Kabul Area (GKA) is hereby established as per the (day) of (month) of (year). PTA is a legal entity with the power to hold property, is liable for its debts and obligations and may enter into agreements with other parties.

§4. The mission of the PTA is, on behalf of the public administration as represented by the Government, the Municipality of Kabul, and other authorities, to exercise authority over the passenger public transportation sector in the Greater Kabul Area. The PTA shall have the duty to develop the urban public transportation system in the best public interest, and to achieve maximum effectiveness in complementing other forms of transport in order to promote the general economic and social well-being of the area and of the society. The fundamental task of PTA is to create an efficient public transport system providing good mobility, attractive and affordable services, and a good and sustainable urban environment.

Section 3 (The Jurisdiction of PTA)

§5. The area covered by the PTA is the Greater Kabul Area, defined as follows:

(to be completed).

§6. The authority of the PTA covers all public transportation within this area, whether it is route-bound or not.

§7. The authority of the PTA covers all modes of public passenger transportation whether they are at present in operation in the area or not. This includes existing modes such as bus,

minibus, taxi and autorickshaw but also conceivable modes of transport based on other types of track and propulsion such as different kinds of rail-based systems, systems based on advanced technology and systems based on small, individual vehicles.

Section 4 (Planning and Coordination of Matters Related to Public Transportation in GKA)

§8. The PTA is responsible for the management of public transport operations in the area including the preparation, constant revision and updating of a Public Transport Report and a Coordinated Public Transportation Plan. The former is a report summarizing the status of the public transportation system in GKA including the supply and usage of the system services and the status of improvement projects and programs. The latter is a comprehensive plan of public transport supply based on a continuous transportation planning and analysis effort professionally undertaken in cooperation and consultation with the Kabul Municipality, Police Department and other relevant authorities, and closely coordinated with the planning and monitoring of other urban transport components such as land use, transport infrastructure and traffic management.

§9. PTA shall undertake studies and produce plans in order to assess the needs for the public transport system in relation to the road and street system in the area; in particular the provision of bus lanes and other right-of-way and various traffic management actions. It is the responsibility of PTA to actively promote the needs of public transport in the general urban transport system and to demonstrate how different actions will result in better service and higher efficiency.

§10. In the case of special road and street infrastructure for public transport being provided, PTA has the responsibility and the authority to determine the conditions for their use. PTA may, for example, stipulate that bus lanes be used exclusively by vehicles with a minimum capacity and with approved environmental properties.

§11. In the case of new urban public transport facilities being considered, e.g. rail-based systems, PTA will be responsible for the evaluation of such schemes giving special consideration to how they can be integrated in the total system.

Section 5. (Regulation of Public Transportation Services in GKA)

§12. Within the general concept of urban public transport eventually being operated primarily by the private sector under public sector regulation and control, the PTA shall act as the interface between the public sector and the private sector in the area of urban public transportation.

§13. The PTA has the sole and exclusive authority to define public transport services and operations in the area. The PTA has the sole and exclusive authority to grant licenses to private (or public) undertakings for the operation of public transport services within the area.

§14. PTA will exercise this authority by entering into contractual agreements with public transportation operators under terms and conditions to be negotiated. Such sub-contracts shall, when applicable, be awarded as a result of an open and fair competitive bidding process.

§15 In the bidding/licensing process, PTA may stipulate that individual operators join together in companies, associations or other legal entities in order to be eligible for licenses and to be allowed to submit bids. PTA may also stipulate vehicle types, frequencies of service (in the case of fixed-route services), number of vehicles (in the case of non fixed-route services) and service hours for the operation of these services. PTA shall only grant licenses to, receive bids from, and enter into subcontracts with undertakings which are deemed as suitable to supply public transport services.

§16. PTA may include in such sub-contracts the obligation of an operator to pay to PTA a fee for the right to provide a certain public transportation. PTA has the right to collect such fees.

§17. PTA may in other cases include in a sub-contract the obligation of PTA to pay to the operator a fee for providing public transportation services as stipulated by PTA.

§18. In accordance with §13 and §14 above, PTA has the authority to "tax" profitable routes and use the revenues to finance such services which may be non-profitable but required for social reasons or for the reason of optimizing the entire urban transport system. PTA may also put together route packages consisting of both profitable and non-profitable routes and thus apply a cross-subsidy mechanism.

§19. PTA will constantly monitor the performance of operators to ensure that undertakings specified in sub-contracts are adhered to, and may impose sanctions if they are not. PTA will not, however, be responsible for enforcements of general traffic rules, for control of vehicle registrations or for vehicle inspections as these responsibilities will be with the Police.

§20. Sub-contracts shall be standardized and designed in a fair way, aimed at the protection of the passengers' as well as the operators' legitimate interests. Contracts shall be made for a fixed period of time, for bus transport normally in the range of 3-5 years, and shall include termination clauses for both sides as well as sanctions in the case of non-fulfilment of contractual requirements. Contracts shall include arbitration procedures compatible with Afghan law in the case of disputes.

§21. PTA shall be responsible for the design of the fare system and empowered with the setting of fares of all public transportation services. PTA shall undertake the necessary analysis and planning to ensure that the fare level provides both a sustainable system and meets social objectives. PTA shall demonstrate to the general public the effects of different fare levels and fare policies in terms of resulting service levels and possible subsidy needs

§22. PTA has the sole authority to grant licenses for the operation of call taxis in the GKA area on terms and conditions to be negotiated. PTA may impose sanctions on the license holder which does not comply with such terms and conditions.

§23. PTA shall ensure that drivers and operators of call taxis are suitable and professional. PTA may require as a condition that taxi drivers to operate under a license must fulfil certain requirements and that they must pass a test specified by PTA. Requirements can for example include local knowledge of the GKA area, basic knowledge of medical care and ability to give first aid, and basic knowledge of legal matters related to the business.

Section 6. (Provision and Operation of Urban Transport Infrastructure Facilities in GKA)

§24. PTA will have the authority to plan, establish and administer public transport passenger terminal facilities, stops and stations in the area. Conditions for operators' use of such facilities will be included in the sub-contracts with transport operators. PTA may establish service facilities including parking facilities or access roads adjacent to these terminal facilities or public land in the area, and may charge fees for their use. PTA may also sub-contract or lease parts of its land to private enterprises for various service functions.

§25. PTA has the authority to lease or contract for advertising in or on the facilities related to the public transport system.

Section 7. (Organizational Structure)

§26. (The Board of Directors) The affairs of the PTA shall be managed by a Board of Directors nominated by Ministry of Transport (Chairman), Ministry of Interior, Ministry of Public Works, and Kabul Municipality, and appointed by the Prime Minister.

§27. (The General Manager) The Board of Directors will appoint a General Manager with the authority to appoint and employ officers and employees and to manage the PTA under the supervision of the Board.

§28. (The Advisory Committee) A Greater Kabul Area Transportation Advisory Committee consisting of representatives of all areas and communities in GKA shall be formed to advise the PTA on urban transport issues and to review the GKA coordinated Public Transportation Plan. Should major changes in service levels and/or fare levels have to be imposed from time to time, these must be reviewed by the Committee.

Section 8. (The Budget and Accounting of PTA)

§29. All expenses of the PTA shall be in accordance with an itemized annual budget prepared and submitted by the PTA to the Board for approval. This PTA expense budget shall be part of a comprehensive rolling five year plan to be submitted annually. An Annual Report for the previous year will be attached to the Plan.

§30. The income of the PTA will consist of revenues resulting from license fees, revenues from the operation of public transport infrastructure facilities, and other revenues assigned by the government to PTA from time to time. Revenues shall normally be recycled back to the public transport system in order to improve standard and quality of service. In the case of a surplus, this will be transferred to the Ministry of Finance.

§31. The PTA shall be exempt from taxation from revenues resulting from license fees and other sources of income derived from the public transport system.

§32. Financial statements of Millie Bus shall be audited annually by independent auditors and must be approved by the Board.

Section 10 (Transitional arrangements)

§33. Any public transport operator lawfully providing services at the time of establishing of PTA may continue to operate the same services as before until anything else has been negotiated with PTA.

§34. Each such operator is required to exchange his existing license, franchise or sub-contract for a new one issued by PTA. The operator must produce the existing license in original at the PTA office within 60 days of establishing PTA. PTA will issue a temporary license with the same expiry time as the one possessed by the operator.

§35. Upon its establishment, PTA will take over the responsibility for existing passenger terminals in the area presently administered by the Kabul Municipality or other authorities (see section 6).

Section 11 (The Elimination of Overlaps)

§36. The following sections of law are hereby declared to be nullified:
(To be completed by Afghan legal expert)

§37. The following sections of law are hereby replaced with new text:
(To be completed by Afghan legal expert.)

ANNEX 5: Outline Terms of Reference for Drafting Legislation for PTA

Background

The passenger transport system in Afghanistan will be mainly deregulated but this principle needs to be modified in urban areas, in particular large cities. If a city wants to have a system of relatively few, high-capacity buses operating in an integrated network, then regulation is a necessity. This is the situation in Kabul where large buses are already on their way. It is therefore necessary to introduce a regulatory concept that is suitable for Kabul and that can also be applied in other cities.

The recommended policy guideline for urban areas is that local governments should be allowed to impose a regulatory system that suits them. The proposed instrument for this is the establishment of a Public Transport Authority (PTA). Under the general policy that public transport operations will be provided exclusively by the private sector, PTA will function as the interface between the public sector and the private sector. It constitutes an instrument for planning and regulation of the public transport sector and for monitoring of the performance of private transport operators. Through PTA, the local government sets the framework in which the private sector operates and it also intervenes when necessary.

In order to prepare the legal framework for this reform, international assistance is required.

Objective

To draft a legal framework that will enable municipalities in Afghanistan, starting with Kabul, to introduce and operate Public Transport Authorities. The legislation shall ensure that local authority, without interference from central government, shall be able to exercise any required regulation of the urban public transport system. At the same time, the legislation shall be flexible enough to allow for different approaches in different cities.

Scope of Work

The work would include following main components:

- to review international examples of legislation aimed at the regulation of urban public transport, with special emphasis on developing countries
- to review existing Afghan legislation and identify any component with an impact on this area
- to draft national legislation that enables city governments to establish a Public Transport Authority in order to regulate urban public transport. If local governments exercise this right, then local legislation shall overrule any general freedom that may be granted in national law to individuals and corporations to start and run private businesses
- to draft legislation that regulates, in general terms, the powers and responsibilities that local PTA's may assume

- to draft specific legal framework for the PTA in the Greater Kabul Area. The previously prepared “Basis for Legal Drafting” (Annex 4) may be used as a point of departure
- to liaise with other activities aimed at renewing the national legislation in Afghanistan, in order to create consensus and avoid conflicts

Since the new legislation needs to be adaptable to other cities than Kabul, it is expected that the consultant team visit other larger cities such as Herat, Kandahar and Mashad-i-Sharif.

Estimated Consultant Input

It is anticipated that consultant input will consist of

- one international public transport organization expert with experience of bus systems franchising
- one international legal expert with experience of development issues
- one local legal expert with experience of the Afghan legal system

Tentatively, it is estimated that the work should be carried out during a period of two months.

Budget

A tentative budget would be as follows:

Foreign consultants	4 man-months @ USD 20 000	80 000
Local expert	2 man-months @ USD 5 000	10 000
Local staff	4 man-months @ USD 1 500	6 000
International travel	2 trips @ USD 1 500	3 000
Local travel	15 domestic trips @ USD 200	3 000
Accommodation	60 days @ USD 150	9 000
Misc		9 000
TOTAL		120 000

At this stage, it might be practical to assume a total requirement of 150 000 USD.