



CAP National Seminar

# CHANGING DIRECTIONS

Towards Sustainable  
Transport in Malaysia

7-10 September 2001

RECSAM, Penang

## TRANSPORT IN NON-MAJOR CONURBATIONS AND RURAL AREAS: SOME POLICY INITIATIVES

by

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## TRANSPORT IN NON-MAJOR CONURBATIONS AND RURAL AREAS: SOME POLICY INITIATIVES

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### Abstract:

*This paper hopes to bring attention to some of the policy issues that ought to be addressed by the National Transport Policy with regards to accessibility needs of the smaller cities and towns as well as rural areas in Malaysia. It will look at the development context of transport provision and some development efforts made in the past with regards to increasing mobility within the rural areas. It promises a review of some new policy initiatives towards better accessibility as reflected by experiences in other countries followed by concluding remarks.*

### 1. INTRODUCTION

While the transport problems of Malaysia's capital city will continue to dominate the headlines, increasingly there is a need to focus attention on those living within the smaller cities and towns who also face difficulties in meeting their needs for movement. The nature and scale of transport problems vary with the size of the urban area and the level of roading and public transport infrastructure available. The quality of transport provision within these urban areas is thought to impact greatly upon its residents through increasing productivity and economic growth, increased land values, allowing better access to jobs and reducing travel costs, and other environmental quality improvements.

However, while governments worldwide have tended to be preoccupied with urban areas, the national transport system must also satisfy the basic social and economic needs of the rural population. In the developing countries, rural transport takes on added importance since these countries have predominantly rural populations where agriculture is the basic livelihood mechanism. In Malaysia, this component of activity is thought to have a major socio-political importance since the rural sector, dominated by the bumiputras, has been the problem focus of the New Economic Policy since 1970. This had meant that within the rural sector, transport provision had also to meet the requirements of regional development efforts as new agricultural schemes emerge.

This paper hopes to bring attention to some of the policy issues that ought to be addressed by the National Transport Policy. After this introduction, the next section of the paper will look at the development context of transport provision in Malaysia. We will look at some development efforts made towards increasing mobility within the rural areas. Following that, there will be a review of some policy initiatives towards better accessibility as reflected by experiences in other countries followed by concluding remarks.



## 2. TRANSPORT CONDITIONS IN NON-MAJOR CONURBATIONS AND RURAL AREAS

The rapid economic growth experienced by Malaysia especially within the Outline Perspective Plan 2 period (1991-2000) had given rise to a significant increase in urbanization. The national urbanization rate increased from 34.2 percent in 1980 to reach 51.1 per cent in 1991. The national urban population had increased at an annual rate of 4.75 per cent in 1990 whereby in 1991 the total urban population was 9.47 million. The percentage of urban population continues to increase from 55.1 per cent in 1995 to 61.8 per cent in the year 2000 at an average annual rate of 4.8 per cent. The increase in the urban population is mainly due to incoming migration to urban areas to take advantage of employment opportunities within the manufacturing and construction sectors. By the year 2020, it is projected that the urban population will reach 18.5 million and account for 65% of the total population.

Increased urbanization and affluence have also been accompanied by a rapid growth in the number of cars and motorcycles from 2.3 million in 1980 to an estimated 6.4 million in 1995, at an average annual increase of 7.6%. As such, the above factors are placing a considerable strain on the present state of urban transport infrastructure resulting in increased traffic congestion and parking problems in most major towns in Malaysia. Rapid urbanization had also revealed the inadequacy of public transport services in many urban areas due to the lack of supply and the quality of services. Car ownership had by then come within the means of even lower-income groups thus reinforcing the public transport circle of decline.

For the nation, transport policy and development has been pursued by seeking to promote national integration, both physically and economically, and by forging a new postcolonial national identity. The search for physical integration has involved the construction of new domestic airports, trunk roads and railways linking the different regions, and the provision of lower order routes, including feeder roads, to rural communities hitherto bypassed by the colonial transport networks.

In terms of roading programs, there has been extensive road development to provide better access between states including the construction of inter-urban toll highways, the Penang Bridge and the East-West Highway. The roading programs have been able to provide better links between the major cities in Peninsular Malaysia. The North-South Expressway, which was opened to traffic in 1994, starts at Bukit Kayu Hitam in the north and ends in Johor Bahru in the south. The Karak Highway, which starts in Kuala Lumpur and ends in Karak, Pahang, is the main access road connecting the west coast to the east coast and has operated since 1998. Penang Bridge, stretching a distance of 13.5 km connecting mainland Peninsular to Penang Island, was opened to public in 1987. Finally, the construction of Malaysia-Singapore Second Crossing was aimed towards easing traffic congestion between Singapore and Malaysia.

During the Seventh Malaysia Plan, the road network increased from 61380 kilometres in 1995 to 65880 kilometres in the year 2000. The roads sub-sector was allocated 59.8 per cent out of the total allocation under the infrastructure sector with a total expenditure of RM 12.3



billion. In addition, the private sector had also expended a total of RM7.9 billion to undertake road projects under the privatisation arrangements. During the Seventh Malaysia Plan, significant progress has been made towards evolving an integrated and efficient urban transport system especially within Kuala Lumpur and the Klang Valley Region whereby traffic congestion has reached a critical level. Other major cities including Georgetown, Ipoh, Johor Bahru, Kuching and Seremban had also undertaken several measures to better manage traffic flow and enhance public transport services.

The Malaysian Urban Transport Planning Project (MUTPP) had foreseen the need for a robust transport policy operating within the majority of cities and towns in Malaysia. There are three main elements of the transport policy. The first concerns optimising measures for the use of existing road space by all classes of road users by introducing low-cost traffic management measures. The second involves investment in the road network aimed at relieving bottlenecks, opening up new areas for development and relieving heavily-congested areas while the last referred to steps towards improving bus public transport services.

It is envisaged that Structure Plans and Local Plans would provide the necessary development context for transport planning. The Fourth Malaysia Plan initiated the production of the new system of development plans introduced by the 1976 Town and Country Planning Act. As at 31<sup>st</sup> December 2000, a total of 97 Structure Plans had been produced providing complete coverage for the Local Authority Areas in Peninsular Malaysia. Amongst other aims, Structure Plans strive to achieve the all-important integration between land use development and the land transport infrastructure.

Thus, the MUTPP recommended that transport plans will need to be prepared for the majority of urban areas from the hierarchy of the national capital, national regional centres, state regional centres through to the state sub-regional centres. By way of a pilot study, the consultants prepared urban transport plans for Ipoh, Johor Bahru and Sungai Petani as case study towns. The experience with these studies revealed that while every town is unique, the same **approach** to urban transport plan preparation is feasible. Table 1 below lists the urban centres which comes under the four topmost functional categories as identified by the Interim National Spatial Plan prepared by the Federal Town and Country Planning Department.

Table 1: Functional Hierarchy of Urban Centres in Peninsular Malaysia

Hierarchy	State	Urban centre	Population 2000*	Designation
National Capital	Federal Territory	Kuala Lumpur	1297526	Large
National Regional Centre	Pulau Pinang	Georgetown	180573	Intermediate
National Regional Centre	Johor	Johor Bahru	384613	Large
National Regional Centre	Pahang	Kuantan	283041	Intermediate
State Regional Centre	Kedah	Alor Star	114949	Intermediate



State Regional Centre	Perak	Ipoh	566211	Large
State Regional Centre	Selangor	Shah Alam	319612	Large
State Regional Centre	Negeri Sembilan	Seremban	246441	Intermediate
State Regional Centre	Melaka	Bandar Melaka	369222	Large
State Regional Centre	Terengganu	Kuala Trengganu	250528	Intermediate
State Regional Centre	Kelantan	Kota Bahru	233673	Intermediate
State Sub-regional Centre	Perlis	Kangar	12504	Small
State Sub-regional Centre	Kedah	Kuah	(7510)	
State Sub-regional Centre	Kedah	Sg. Petani	(115519)	
State Sub-regional Centre	Kedah	Kulim	(28015)	
State Sub-regional Centre	Perak	Taiping	183320	Intermediate
State Sub-regional Centre	Perak	Lumut/Sitiawan	(8920)	
State Sub-regional Centre	Perak	Teluk Intan	(48350)	
State Sub-regional Centre	Negeri Sembilan	Kuala Pilah	(11591)	
State Sub-regional Centre	Negeri Sembilan	Port Dickson	(25792)	
State Sub-regional Centre	Johor	Muar	(63123)	
State Sub-regional Centre	Johor	Batu Pahat	(71132)	
State Sub-regional Centre	Johor	Kluang	(49043)	
State Sub-regional Centre	Johor	Segamat	(32286)	
State Sub-regional Centre	Johor	Mersing	(14316)	
State Sub-regional Centre	Pahang	Muadzam Shah	na	
State Sub-regional Centre	Pahang	Temerloh	(8538)	
State Sub-regional Centre	Pahang	Mentakab	(14696)	
State Sub-regional Centre	Terengganu	Cukai	(17804)	



State Sub-regional Centre	Terengganu	Dungun	(36473)
State Sub-regional Centre	Pahang	Kuala Lipis	(10605)
State Sub-regional Centre	Kelantan	Gua Musang	na

\* Year 2001 Census estimates

Population in brackets ( ) are 1991 Census figures

### 3. POLICY RESPONSES TOWARDS BETTER MOBILITY

Some writers on transport have been at pains to point out the difference between 'mobility' and 'accessibility'. 'Mobility' is simply the ability to move around, without any particular destination (Nutley 1992). It is essential to appreciate that the purpose of transport is to provide accessibility, or the ability to make a journey for a specific purpose. Transport is not consumed for its own sake, but it is merely a means to an end (a derived demand). Hence, for example, residents in a rural village A seek access to a market town B in order to acquire goods or services that are not available in the village. If A and B are beyond walking distance apart, then transport is needed to overcome the distance that separates them. However, both terms are used extensively and often interchangeably as they are closely-related concepts.

Transport is a vital component of the system of services necessary for the continuing existence of dispersed settlements in less-densely populated areas. Lack of roads often prohibit large sections of the population from entering the market economy and often relegated to dependence on subsistence agriculture. Any kind of quality of life improvement for the rural population requires access for delivery of fertilizers, seed, fuel, water-supply equipment, building materials and for export of basic products. Provision of education and medical services are also deterred by lack of passable roads. In such areas, transport operations and planning should not be 'demand-led' but more realistically 'needs-based'.

Transport, especially the road system, has often been viewed as an integral part of the development process in Malaysia. According to Leinbach, nowhere in the region has transport such a strong and leading role in development with complimentary budget resources than Malaysia (Leinbach and Chia Lin Sien 1989). Malaysia's various Five-Year Development Plans contain the most complete statements on the details of progress in transport development. From the Mid-Term Review of the Second Malaysia Plan (1971-1975), transport has been viewed as integral to the New Economic Policy, which sought, amongst others, to expand bumiputra participation in the economy.

During the Third Malaysia Plan (1976-1980) the basic theme of transport for regional development was also enunciated. The allocation for transport was increased during Mid-Term Review by RM 2.2 billion over the original RM 2.8 billion. The increased allocation was assigned mainly to road construction but also included were port developments and the expansion of civil aviation facilities. In particular, the role of regional development and land settlement schemes is considered noteworthy. The basic intent was to resettle landless and underemployed people under the auspices of the Federal Land Development Authority



(FELDA) and open up new land for the cultivation of oil palm and rubber. Through FELDA and other regional development schemes in Johor, Pahang, Negeri Sembilan, Kedah, Perak and Trengganu, over 2,400 km of development and feeder roads were built between 1971 and 1980. These roads provided internal village access and also linked settlement clusters to the main road network. Roads were extended within the Muda and Kemubu irrigation schemes in Kedah and Kelantan.

Also noteworthy is the effort to accelerate in-situ agricultural improvement scheme through the improvement of farm-to-market roads. Under the Third Malaysia Plan, these transport developments are part of an overall agricultural package which was initially carried out in northern Kelantan. An allocation of RM 457 million was provided for an Accelerated Rural Roads Programme. The programme, which included ongoing projects, new roads, and the upgrading of existing structures, resulted in the completion of nearly 4,100 km of rural roads in the Peninsula. Under this programme, clear emphasis was given to the poorer and less developed states of Pahang, Kedah and Kelantan. Emphasis in rural road development in the 1980s then caught on in the states of Sabah and Sarawak.

Overall the implementation of road expansion programmes resulted in nearly 30 percent gain in the total road network across Malaysia between 1980 and 1983. While all states benefited, low-income Kedah and Kelantan received the greatest attention. With a relatively low population density, compact scale, abundant land for development and strong revenues generated from oil palm and rubber, the improvement of rural access in Peninsular Malaysia has been the most dramatic in the region save for Thailand. However, a concern that has frequently been expressed is that improvements in transport infrastructure, services and facilities in the past have been inappropriate to, and ineffective in matching the transport needs of the poorest people.

The Fourth Malaysia Plan (1981-1985) reveals a slight downward re-scaling of investment in roads, but in spite of this, a number of inter-urban expressway projects were set underway. The rural road programme also was stressed, with the objective of providing adequate access to rural areas and improvements of intra-state networks. Over 3,100 km of existing village (kampung) roads were upgraded. Further, the Fourth Malaysia Plan reinforces the urban strategy and regional development programme initiated in the Third Malaysia Plan by proposing:

- To give priority to the establishment of corridors of the development in the less developed East coast of Peninsular Malaysia.
- To give priority to the development of Shah Alam, Kelang, Kajang, Bangi, Rawang and Sepang in the Kelang Valley to disperse urban growth from Kuala Lumpur.
- To ensure that the major regional centres of Georgetown/Butterworth, Johor Bahru and Kuantan are fully equipped to fulfil their role and are supported by the second order towns such as Alor Setar, Seremban and Melaka (Economic Planning Unit 1981).



During the Fifth Malaysia Plan, investment in transport during the period reflects the needed response to economic change in the Peninsula with a more sizeable expansion of the networks. Total road network grew by nearly 50 percent between 1980 and 1985 alone (Fifth Malaysia Plan, 1986). The sharply increased allocation to roads in the Fifth Malaysia Plan is largely in support of rural roads and the improvement of intra-state transport networks. Subsequent national plans have re-affirmed these policies but in more general terms. For example, the Sixth Malaysia Plan states that "efforts will continue to be directed at diversifying the economic base of the lesser developed states and expanding their social, economic and physical infrastructures" (Economic Planning Unit 1991 p50).

#### 4. NEW POLICY INITIATIVES

As mentioned above, it is heartening to note that the Malaysian Urban Transport Planning Project (MUTPP) had foreseen the need for a robust transport policy operating within the majority of cities and towns in Malaysia. In their recommendation for the preparation of urban transport plans, the consultants had differentiated between the two major components, that is, the Action Plan and the Medium-to-Long Term Plan. The Medium-to-Long Term Plan is concerned with strategy and will normally focus on major improvements to the road network and related policy guidelines including the need for demand management and public transport improvements. The Action Plan will define in detail projects to increase the capacity of the existing road network, reduce traffic accidents, improve bus and lorry operations and improve the pedestrian environment.

Transport policy options are recommended for both smaller towns and larger cities. In smaller towns, increased levels of private vehicles ownership can be accommodated by good management of the road system and some new road construction. In smaller towns, bus services are still needed to provide accessibility for lower-income residents, children and other transport-disadvantaged groups. Lower-income residents would require low-fare bus services to link them to their places of employment. Movement of school children should largely be catered for by school buses. Buses need to be more disabled-friendly in order to cater for the disadvantaged segment of the population. For newly-developing areas within towns, bus service provision has to be encouraged in order to lessen car dependence. Even in the smaller towns, growing levels of traffic often contribute to an increase in the number of traffic accidents and pedestrian intimidation by traffic. The designation of user priority areas especially in favour of the pedestrians within the inner city core would encourage more liveable cities.

In the larger cities and towns, especially during peak hours, traffic congestion could become very severe. Strong policy measures are needed to discourage car users in favour of using public transport. The two-pronged strategy that are necessary to achieve this is through demand management and public transport enhancement. Demand management measures include control over parking availability and the more severe road pricing measure which is more suited to cities of over 1 million population. In most larger cities in Malaysia, an all-bus solution is seen to be more feasible than the bus-LRT combination which is practical only in the largest cities such as Kuala Lumpur, Georgetown, Ipoh and Johor Bahru.



On the other hand, the rural transport problem is associated with the dispersed nature of the population and the difficulties experienced in securing acceptable levels of access to services which are only available in certain settlements. Rural transport deprivation is but one of several components of a wider set of social and economic problems which face rural populations and are often interlinked in terms of their origins and their possible solutions. Rural transport problems in developing countries are often being tackled at a much more basic level than in advanced economies. As we have seen in Malaysia, the creation of a network of adequate roads is often accorded the first priority. Non-motorised transport will still play a major role in providing mobility within rural communities. A popular transport mode used in rural Malaysia is the motorcycle. Motorcycles are cheaper, use less road space and may generate less pollution, but are still regarded as inferior to cars.

Within the developed countries, the traditional approach of ensuring adequate bus links between the village and the town became just one of the several possible solutions involving a redeployment of transport modes, services and possibly people themselves. Based upon the classification advanced by Moseley (1979), the alternatives are described as (a) the 'transport option' whereby people travel to the facilities; (b) the 'mobile services option' whereby goods and services are brought to the people; (c) the 'fragmented service option' whereby facilities are small-scale and dispersed among the population; and (d) the 'key village option' whereby the population is concentrated into more economic units.

The transport option - the inability of conventional scheduled buses to meet the needs of rural societies has prompted the introduction of a range of multi-purpose vehicles, which are often run as demand-actuated services, eg. the post-bus.

The mobile services option - is mainly associated with mobile shops and libraries in some areas. Lower order delivery services such as mail and bread are widespread.

The fragmented service option - rural communities were made much more self-sufficient in local services. However, a dispersed pattern of small-scale facilities would run counter to contemporary trends towards rationalisation and centralisation.

The key village option - another means of reducing the need to travel is to concentrate population into larger settlements where basic facilities could be more effectively located.

A useful vehicle through which investments for public transport could be channelled and coordinated is shown by the example of the UK Annual Public Transport Plans (PTPs). PTPs were introduced under the Transport Act 1978 for non-metropolitan county councils and extended to metropolitan county councils under the Transport Act 1983. PTPs are intended to promote and coordinate an efficient public transport for the coming three years. PTPs include an estimate of how far current needs are being met and what services are needed in the short and long term. PTPs contain an estimate of costs and proposals for obtaining finance.

Besides this, Transport Policies and Programmes (TPPs) have also been submitted by local to central government in the UK annually since 1975. They include transport planning objectives, priorities and programmes for all modes of transport, pricing and expenditure



proposals for the coming five years. They must be compatible with the policies of the structure plan. Since Malaysia has completed the preparation of 97 Structure Plans, such instruments provide an opportunity to link land use and transport development effectively.

## 5. CONCLUSIONS

It is clear that most cities in Malaysia are facing similar problems of movement and increasing levels of motorisation is slowly but surely destroying the urban fabric of our cities and towns. For the major metropolitan areas of Kuala Lumpur, Johor Bahru and Georgetown, the problems seem advanced and the likely solutions towards easing the congestion would need some form of the Light Rail Transit technology. For the other cities and towns, the time to arrest the problem is now because delaying action might only complicate matters in the future.

The precise nature of policies to be adopted will depend on many considerations such as the existing transport systems, the quality and economic viability of services, the gap between supply and demand for urban travel, the physical character of the urban area concerned, attitudes to paratransit and traditional forms of non-motorised transport if they exist, and other economic conditions and extent of political commitment towards solving the problems.

As far as rural access is concerned, it is increasingly being realised that development agencies have been too concerned with major road infrastructural investments and less so on maintaining viable rural public transport services. Rural communities are just one of the many sectors which make an urgent call upon funds allocated at the national level for transport improvements, and even when an appropriate allocation has been made there is a question of how best to distribute the investment within individual rural districts to secure the most effective return in social and economic terms. The specific transport needs of each area must be identified, followed by the selection of the most effective technology in terms of road surface standard and vehicle type. A focus instead on local rural roads and transport systems at a simpler 'appropriate' level of technology would be more likely to benefit the poor and also spread resources more widely (Tolley and Turton 1995). Roads could then be upgraded in stages corresponding to the growth in traffic.

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