



Non- Motorized Transport (NMT) in Dhaka

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Types of NMT in Dhaka

WALKING



Types of NMT in Dhaka

NON-MOTORIZED VEHICLES



Rickshaw



Bicycle

Types of NMT in Dhaka

NON-MOTORIZED VEHICLES



Rickshaw- van



Hand Cart

NMT Share in Dhaka

NMT account for a substantial share of trips made in Dhaka

Travel Mode	Trip Share (%)	
	STP (2005)	DHUTS (2009)
Walk	14	20
Cycle-rickshaw	34	38
Public Transport	44	30
Motorized transport	8	12

Source: Derived from STP 2005a and DHUTS 2009

Notes: Public Transport – Bus

Motorized Transport- Car, auto-rickshaw (CNG), taxi, motorcycle

Facilities Provided for NMT in Dhaka

Facilities Provided for NMT in Dhaka

❑ Walking

Over 70% of the roads have no sidewalks and among those that exist about 40% are occupied illegally (DOE, 2009; STP, 2005a)



Encroachment of sidewalks by vendors

Facilities Provided for NMT in Dhaka



Parked Car



Ticket Counter



Open Sewer



Dustbin

Facilities Provided for NMT in Dhaka

❑ Poor pedestrian crossing facilities



Facilities Provided for NMT in Dhaka

❑ Poor pedestrian crossing facilities

Overpasses are encroached and are in excessive height, inconvenient for elderly, women, children and physically disadvantaged group.



Facilities Provided for NMT in Dhaka

❑ Bicycle

According to STP (2005a), bicycles account for only 2% of vehicular traffic

Factors contributed to low usage

Factors	Description
Cost	The cost of bicycle is very high*, considering the relatively low income levels of the sector of the population that is most likely to use them as a mode of transport.
Safety	No designated bicycle lanes or facilities are provided on roads. In addition, poor condition of the surface of many roads represents a serious hazard for bicycles.
Status	Persons who can afford bicycle are sometimes embarrassed to use, as bicycle is considered as the transport mode of the poor.
Culture	Cultural norms suggest that it is neither suitable nor appropriate for women to use bicycle.
Security	Suitable means to park and leave a bicycle unattended with an expectation that it will be there upon ones return, are not readily available.

Source: STP 2005a

Facilities Provided for NMT in Dhaka

❑ Bicycle



Facilities Provided for NMT in Dhaka

❑ Rickshaw

Despite one-third of person trips are made with rickshaw, many strategies have been used to reduce it.



Narrow cycle-rickshaw lane



Long queue in a single lane



Deplorable state of cycle-rickshaw lane

Economy, Society and NMT

Economy, Society and NMT

❑ NMT and Economy

- ❑ Rickshaw industry generates huge amount of non-skilled employment and maintains **income of some of the most vulnerable urban dwellers**.
- ❑ **1.25 million people directly involved** with driving and maintaining rickshaws, while **5 million people depend** on them (Freund and Martin, 1999)
- ❑ Urban rickshaws annually account for over **30,000 passenger miles** and nearly **100 ton miles of goods** movement.
- ❑ Rickshaws contribute **34% of the value added** from the transport sector to GDP (Gallagher, 1992).
- ❑ Not only the pullers and families, but also others depend on them in terms of selling products to them and their passengers and repairing rickshaws.

Economy, Society and NMT

❑ NMT and Land use

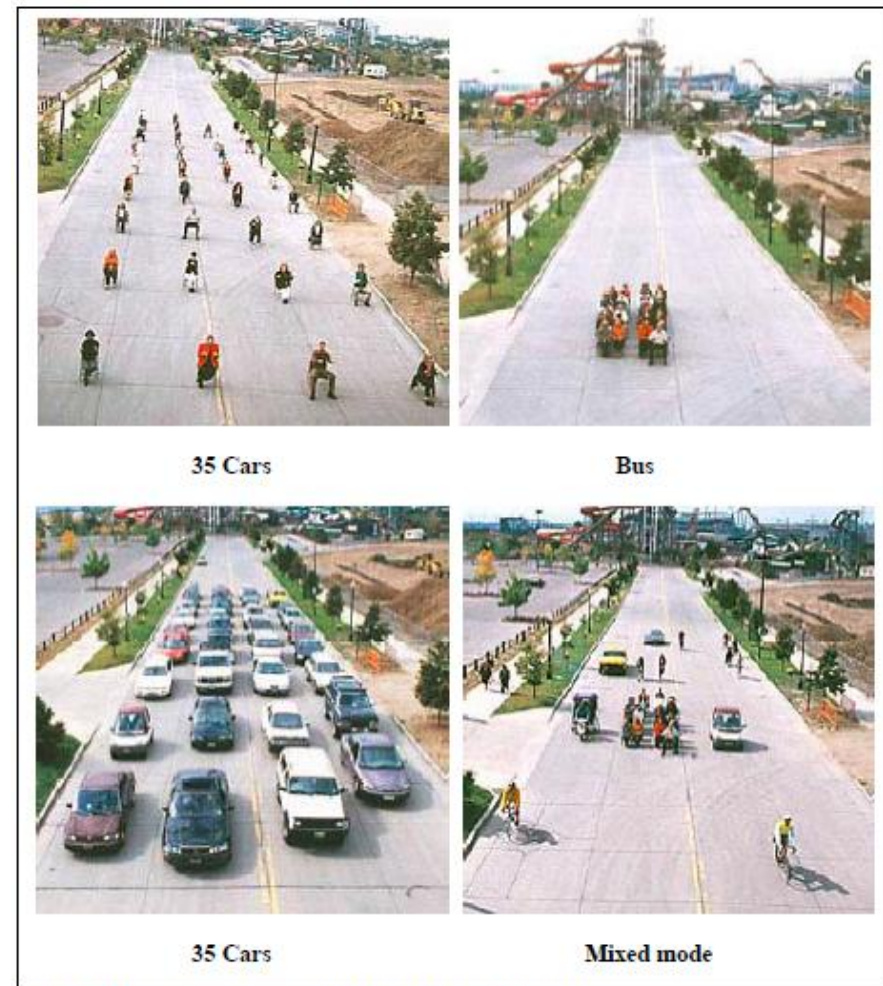
- ❑ Dhaka's dense urban fabric combined with intensively mixed land uses throughout the city, make it ideal environment for walking and cycling.
- ❑ 76% of trips are short trips, most of them of 3-4 km, rickshaw can be the fastest way without the use of fuel, emission of pollutants and creation of noise (Bari and Efroymsen, 2005c).
- ❑ 69% road width is of 8.75m or less, these narrow roads are suitable for NMT



Economy, Society and NMT

❑ NMT and Traffic congestion

NMT are most efficient modes of scarce road space than private motor vehicles, help to combat against congestion.



Source: http://www.denvergov.com/Blueprint_Denver/1323photo.asp?cview=2

Figure 11: Less road space required by bus and mixed mode than private car

Economy, Society and NMT

❑ NMT and Traffic congestion



NMT free road



Road with separate NMT lane



Economy, Society and NMT

❑ NMT and Transport disadvantaged group

- ❑ The current bus transport services are insecure, unreliable, congested for women and children (Shefali, 2000).
- ❑ Difficult for women to compete with men for the limited space on the buses specially during peak hour.
- ❑ Women prefer rickshaw in the predominantly Muslim city, where religious dogma makes it **difficult for women to share crowded buses** with predominantly male passengers (World Bank, 1995).
- ❑ According to STP (2005a), **40% of the rickshaws** are used by women and children.

Economy, Society and NMT

❑ NMT and Transport disadvantaged group

- ❑ For low income people, with extremely limited transportation choices, NMT is the most appropriate and efficient form of transport (World Bank, 1998).
- ❑ 56% of walk trips are made by low income households compared to only 16% of those in the high income households and rickshaw is the dominant mode for both low and middle income households (STP, 2005a).

Economy, Society and NMT

❑ NMT, Health and Environment

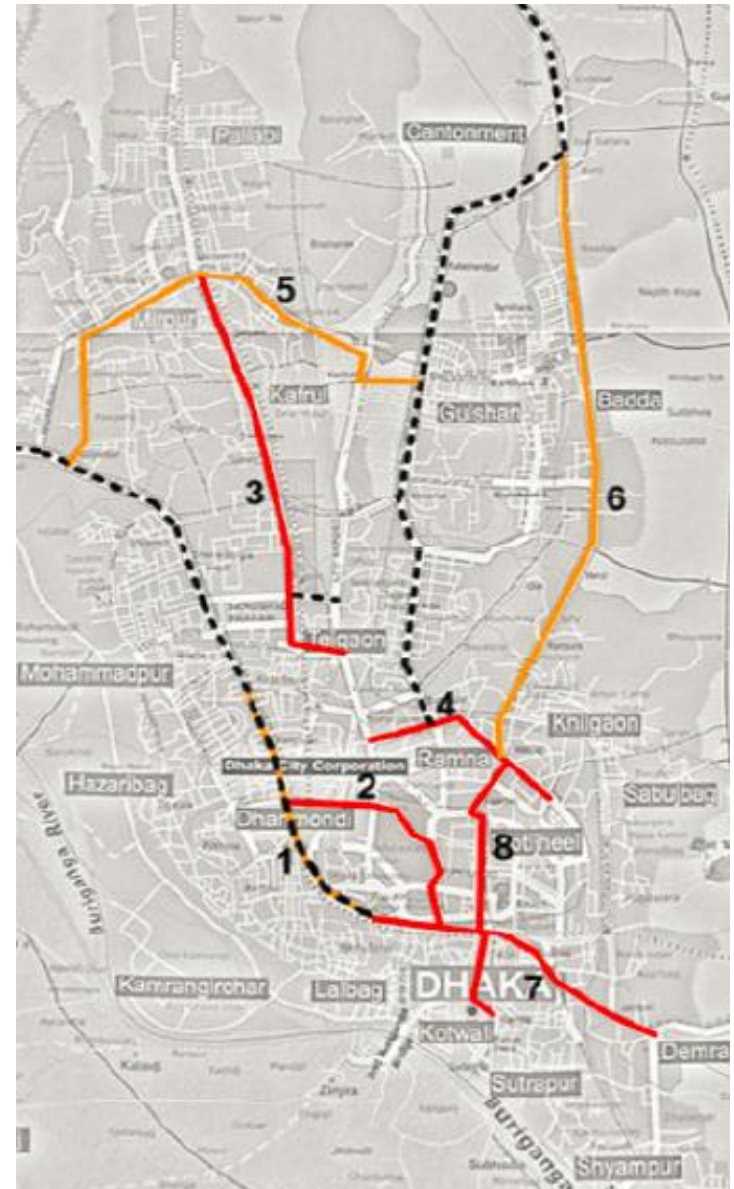
- ❑ Regular walking and cycling is good for health, reduces risk of blood pressure, diabetics, obesity and heart attack.
- ❑ As NMTs do not use fuel it can control air pollution to a significant extent.



Government Policy towards NMT

Government Policy towards NMT

- ❑ The recommendations of the DUTP, 1998 and the National Land Transport Policy (2004), DCC has adopted a plan to phase out cycle-rickshaws from eight major roads of Dhaka, comprising a total of 120 km (STP 2005a; Menchetti 2005; Bari and Efroymsen 2005d).
- ❑ The World Bank originally supported this plan, but observing the severe **negative socio-economic implications** on all users particularly vulnerable road users, and the **marginal improvement in traffic conditions** (Hummel 2008),.



Government Policy towards NMT

□ STP (2005) Policy Recommendations for Non-motorized Transports

Issues	Policy Recommendations*	Responses#
Pedestrian	<ul style="list-style-type: none">• “Pedestrian First Policy”- implement a program of pedestrian facility provision to serve pedestrians better and encourage people to walk from choice rather than from necessity.	<ul style="list-style-type: none">• There is no doubt that such a pragmatic policy initiative is recommendable. However, the question remains whether only enforcement of some regulations alone could ensure pedestrian-friendly transport facilities without appropriate planning and provisions for adequate investment.• STP has ignored the contribution of pedestrians while evaluating different alternative transport strategies. Only 0.22% of the total investment has been allocated for the development of pedestrian facilities.• Developing appropriate pedestrian facilities requires the allocation of sufficient resources in accordance with the current and potential modal share of pedestrians.

Government Policy towards NMT

□ STP (2005) Policy Recommendations for Non-motorized Transports

Cycle-rickshaw	<ul style="list-style-type: none">• Establish a program for the re-licensing of cycle-rickshaw owners and operators and a means to improve the skills of the drivers and the quality of the vehicles.	<ul style="list-style-type: none">• There is indeed much room for improvement in the cycle-rickshaw sector in Dhaka. Efforts should be made to ensure that such policy objectives are employed for the overall improvement of cycle-rickshaw services, rather than as a tool to control the number of rickshaws.• The continuing popularity of cycle-rickshaws and high reliance on them indicates that a significant decrease in their numbers would be accompanied by a significant deterioration in transport services for the majority.
	<ul style="list-style-type: none">• Rely upon travel demand and market forces to determine the number of cycle-rickshaws in operation, rather than through the control on license numbers.	<ul style="list-style-type: none">• This is no doubt a progressive approach. However, in order to ensure the effectiveness of a travel demand and market responsive strategy, it is imperative to create a level playing field for both non-motorized and motorized vehicles.• No transport system can remain competitive if it loses its continuity. If cycle-rickshaws are banned from main arterials, they would lose their efficiency and economic viability. Cycle-rickshaws, rather than competing with public transport, acts as a supporting or supplementing mode by transporting people to and from mass transit. Banning cycle-rickshaws from main roads will sever interconnectivity between cycle-rickshaws and public transport.• Cycle-rickshaws networks should be continuous, allowing people to travel easily along main arteries as well as to and from them.

Government Policy towards NMT

□ STP (2005) Policy Recommendations for Non-motorized Transports

	<ul style="list-style-type: none">• Continue with the planning and implementation of a gradual program that redefines the role for cycle-rickshaws as one of a neighborhood circulation system and a feeder service to mass rapid transit stations, including suitable facilities to provide such services.	<ul style="list-style-type: none">• The utter failure of cycle-rickshaw bans in the major roads should not be forgotten when drafting transport policy recommendations. It is a popular notion that non-motorized vehicles should be restricted to minor side roads, leaving the main roads exclusively for motorized vehicles.• Banning cycle-rickshaws from major roads greatly limits the ability of cycle-rickshaws to remain viable. It is also highly inefficient to force people into multiple trips and the use of motorized vehicles for short portions, when a single cycle-rickshaw trip would easily transport them.• Since the numbers of short trips are very high (76%), restrictions on cycle-rickshaws on major arterials would split numerous short origin-destination pairs, thereby severely hampering person-mobility.
	<ul style="list-style-type: none">• Encourage and support efforts to improve the design of cycle-rickshaws as well as the associated maintenance facilities and procedures.	<ul style="list-style-type: none">• It is encouraging that STP recognizes the need to improve the design of cycle-rickshaws as well as the associated maintenance facilities and procedures. However, mere statement of needs without incorporating such initiatives within a package approach does not seem to have any real implications.• It is not possible to initiate meaningful improvement without allocating sufficient resources within the domain of a well integrated transport policy.• The attempt to reduce cycle-rickshaw numbers makes questionable the integrity of the STP's claim to have an interest in improving cycle-rickshaw service.

Government Policy towards NMT

□ STP (2005) Policy Recommendations for Non-motorized Transports

Bicycle	<ul style="list-style-type: none">• Consider as a mode of transport and provide separate lanes and crossings.• Support local industries for manufacturing bicycles to make bicycle affordable.	<ul style="list-style-type: none">• It is encouraging that STP recognizes the importance of bicycle as in many cities of the world bicycle is a major component of the urban transport system.• Developing appropriate facilities for cyclist requires the allocation of sufficient resources, but only 0.22% of the total investment has been allocated for the development of non-motorized vehicles including bicycle and cycle-rickshaw facilities.
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Source: *STP 2005a, 2005c; #Bari 2007

Recommendations regarding NMT

❑ Rickshaw and Bicycle

- ❑ Separate lanes can be provided on roads for rickshaws to move.
- ❑ 'Rickshaw District' can be delineated that means the domain of rickshaws can be defined by coloring them with specific color for the particular area only where they can circulate. It would restrict the scattered and haphazard movement of rickshaws.



Recommendations regarding NMT

❑ Walking

- ❑ Walking environment need to be improved (safe, secured and convenient) to encourage people to walk.
- ❑ After constructing a walkway, it has to be maintained properly. There should be enforcement of law to maintain its quality and surrounding environment.



Thank You