

Non-motorised Transport (NMT) – Transport Greening

Mr Kobus Labuschagne
CSIR Built Environment

Greening of Infrastructure Programmes in South Africa

Vulindlela Academy
DBSA Campus
Midrand

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Part 1: NMT – Instrument for the Greening of Transport

NMT – Instrument for the Greening of Transport

Introduction:

- “**Sustainable transport** (or **green transport**) refers to any means of transport with low impact on the environment and includes walking and cycling, transit orientated development, green vehicles, CarSharing, and building or protecting urban transport systems that are fuel-efficient, space-saving and promote healthy lifestyles.”(Wikipedia)
- NMT, especially walking and cycling, is supportive of green mobility.

NMT - Instrument for the Greening of Transport

- Road infrastructure design focussed on car travel.
- Lack of NMT infrastructure has inhibited uptake of cycling as transport mode.
- Replanning and design of urban space/land use.
- Perceived benefits of providing NMT infrastructure:
 - Reduction of congestion
 - Reduction of vehicle emissions and pollution
 - NMT as feeder system to public transport:
 - Road based (bus & taxi)
 - Rail (SARCC, Gautrain)
 - Promotion of alternative modes, e.g. eBikes
 - Promoting a healthy life style



NMT - Instrument for the Greening of Transport

- Deprived communities (urban and rural)
 - Struggling with access to facilities and economic main streaming.
 - Lack of access to amenities and opportunities aggravates socio-economic strife.
 - NMT is cost-effective and green mobilisation suitable for all walks of life.
 - NMT (ADT & cycling) can support entrepreneurship in urban and rural communities, e.g. transporting and selling commodities.

- Lack of NMT infrastructure leads to a number of social costs:
 - High levels of road injury and death among pedestrians/cyclists and negative consequences for the dependents of victims.
 - Pressure on resources such as police and hospitalisation and treatment of victims.



NMT – Instrument for the Greening of Transport

Recent initiatives:

- **Department of Environmental Affairs – Greening Policy and SWC2010 host cities**
 - Evaluating the overall programme concept taking into consideration the results of the pre-feasibility study (i.e. demand, technical feasibility, sustainability of programme, implementation capacities, etc.)

- **Department of Transport - Shova Kalula**
 - Providing 1 million bicycles to scholars in rural areas by 2010
 - Provinces and their consultants (e.g. BEN in Western Cape) as the implementing agencies.
 - Schools - custodians of programme.

Part 2: Need for NMT Infrastructure

Need for NMT Infrastructure

- In 2003, the Department of Transport conducted the National Household Travel Survey (NHTS).
- 2 259 million or *23,0 per cent of the workforce* indicated that they were walking to their places of work.
 - Differentiated by area, figure showed that in *metropolitan areas* about 8,7 per cent were walking, whereas figures for *urban and rural areas* were much higher, respectively 24,0 and 51,8 per cent.
 - The survey also indicated that 90,6 per cent of the 7,5 million learners in *rural areas* were walking to schools and educational centers.

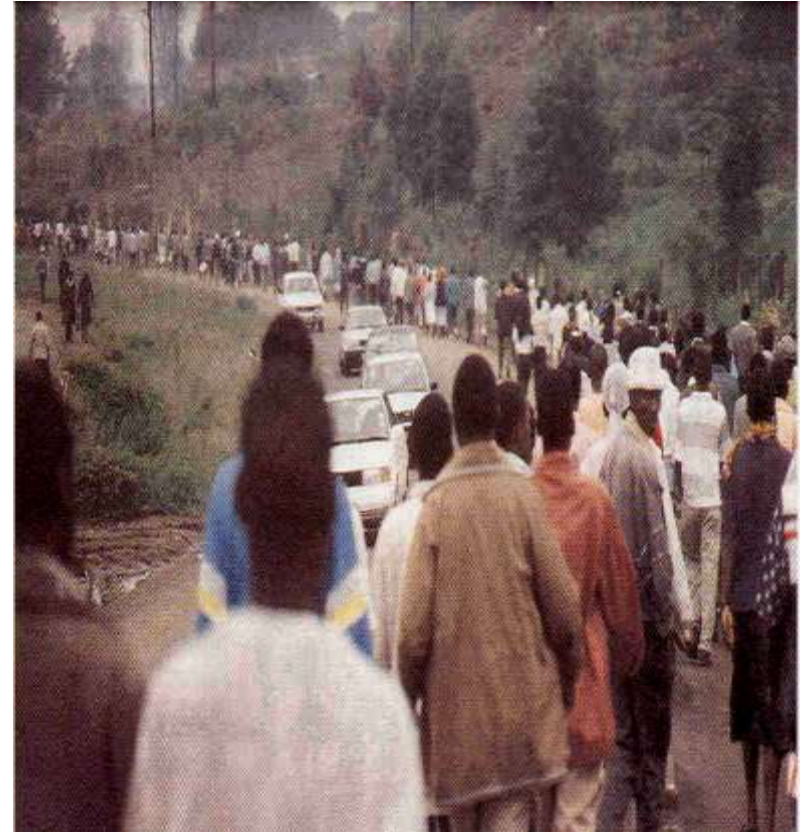
Need for NMT Infrastructure

- Pedestrians and cyclists (NMT) very vulnerable in road traffic.
- Major increase in vehicular traffic over last decade. More difficult for NMT users to share road space with traffic.
- Between 2005 – 2009, 26 984 pedestrians were killed on South African roads:
 - Freeways and major provincial roads
 - Arterial and collector roads
 - Residential streets
 - Rural roads
- Contributing factors to casualties:
 - Human behaviour
 - Law enforcement
 - Infrastructure (lack of)
 - Lack of integrated transport and land use planning
 - Transport planning

Pedestrians in Cities



Pedestrians on town fringes



Rural Pedestrians



Rural pedestrians



Wheelchair riders



Electric wheelchair: NMT or not?





Rural cyclist, Child cyclist



Child cyclists in residential areas



Cyclists: Racing & Recreational



Commuting by bicycle



E-Bikes



- The e-bike can be effectively used for errands and trips where not much storage space is required, and is ideal for daily trips to work. The range of the bike is approximately 20km before the battery runs low and needs to be recharged. Pedalling is not required on the flat, downhill or gentle uphill (unless you wish to go faster), but is required to go up steeper hills comfortably.

Cyclists carrying loads



Pedicabs and custom built bicycles



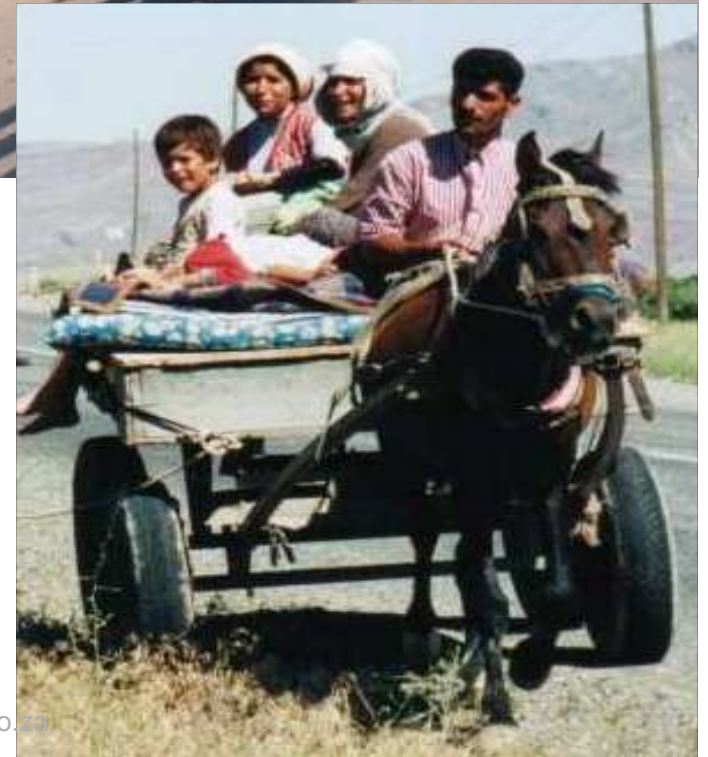
Cape Town Pedicabs



Wheelbarrows, push carts, trolleys, prams



Animal drawn vehicles – goods/passengers



Types of NMT Infrastructure required

- The most effective measures to protect pedestrians include the following:
 - Separation of pedestrians and vehicular traffic by means of grade separation, e.g. footbridges and subways.
 - Specialised infrastructure for people with disabilities
 - Infrastructure for other specialised NMT users, including electric wheelchairs, Segway's and e-Bikes.
 - Public transport facilities e.g. bus and taxi bays, combined with walkways to keep pedestrians out of the roadway;
 - Pedestrian barriers on high speed roads;
 - Pedestrian median refuges on wide roads to allow pedestrians to negotiate one carriageway at a time;
 - Walkways and cycle tracks, most important facilities to separate pedestrians from the roadway;
 - Traffic calming measures, e.g. raised pedestrian crossings (raised platforms), speed humps and mini traffic circles aimed at reducing speed;
 - Speed law enforcement cameras in areas with high pedestrian activities;
 - Street lighting to make pedestrians more visible.

Reasons for providing NMT Infrastructure

- The ***acceleration of NMT infrastructure provision*** in South Africa as a contributor to achieve the road safety targets for 2014 as set by *ASGISA* and the *Millennium Goals for the Transport Sector in Africa*.
- The **Decade of Action for Road Safety 2011 – 2020:**
NMT road users, especially pedestrians, a major proportion of the road casualty problem, both in terms of fatalities and injuries.

Part 3: : NMT Infrastructure and Poverty Alleviation – empowering communities



NMT Infrastructure and Poverty Alleviation

- Need
 - Major need to NMT infrastructure in previously disadvantaged areas and townships, in general.
- Initiate construction programmes in communities to provide NMT infrastructure in terms of the Expanded Public Works Programme:
 - Identification of trainers/mentors
 - Selection of community members
 - Training programmes
 - Using labour based methods – sidewalks/cycle lanes
 - Maintenance programmes
- Benefits of programme:
 - Upskilling of unskilled labour
 - Job creation
 - Income generation
 - Less dependent on government subsidies



Part 4: Conclusions.

Conclusions

- NMT provides various opportunities to promote the Greening of Transport by promoting walking and cycling in stead of using car travel, thus reducing pollution and noise.
- It also serves as feeder system to public transport and should be planned in conjunction with public transport.
- Major need exist to provide adequate and appropriate NMT infrastructure both from a road safety and traffic operations perspective. There is a huge backlog in this regard.
- The provision of NMT infrastructure could serve as training and poverty reduction programme within the Expanded Public Works Programme.



CENTRALSTATION

AURANG

Thank you

