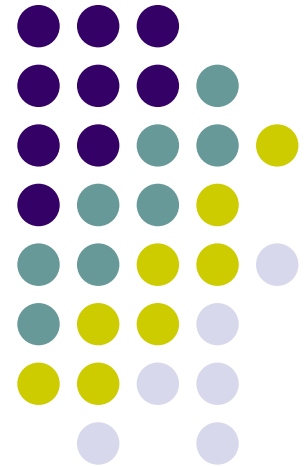
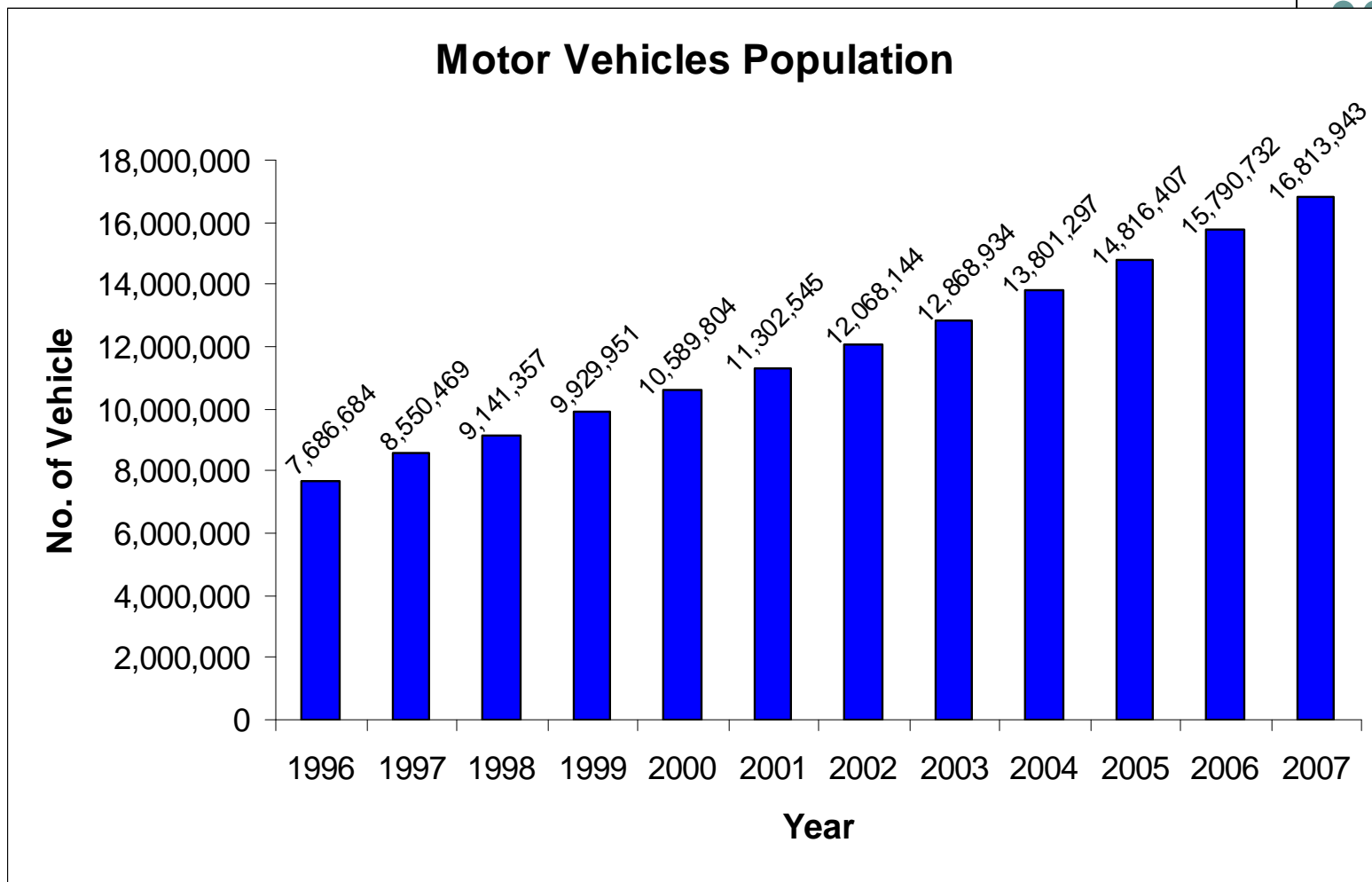
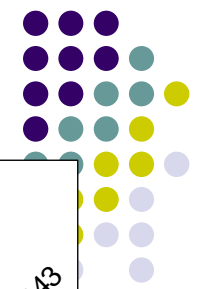


**THIRD REGIONAL EST FORUM  
17-19 MARCH 2008  
SINGAPORE**

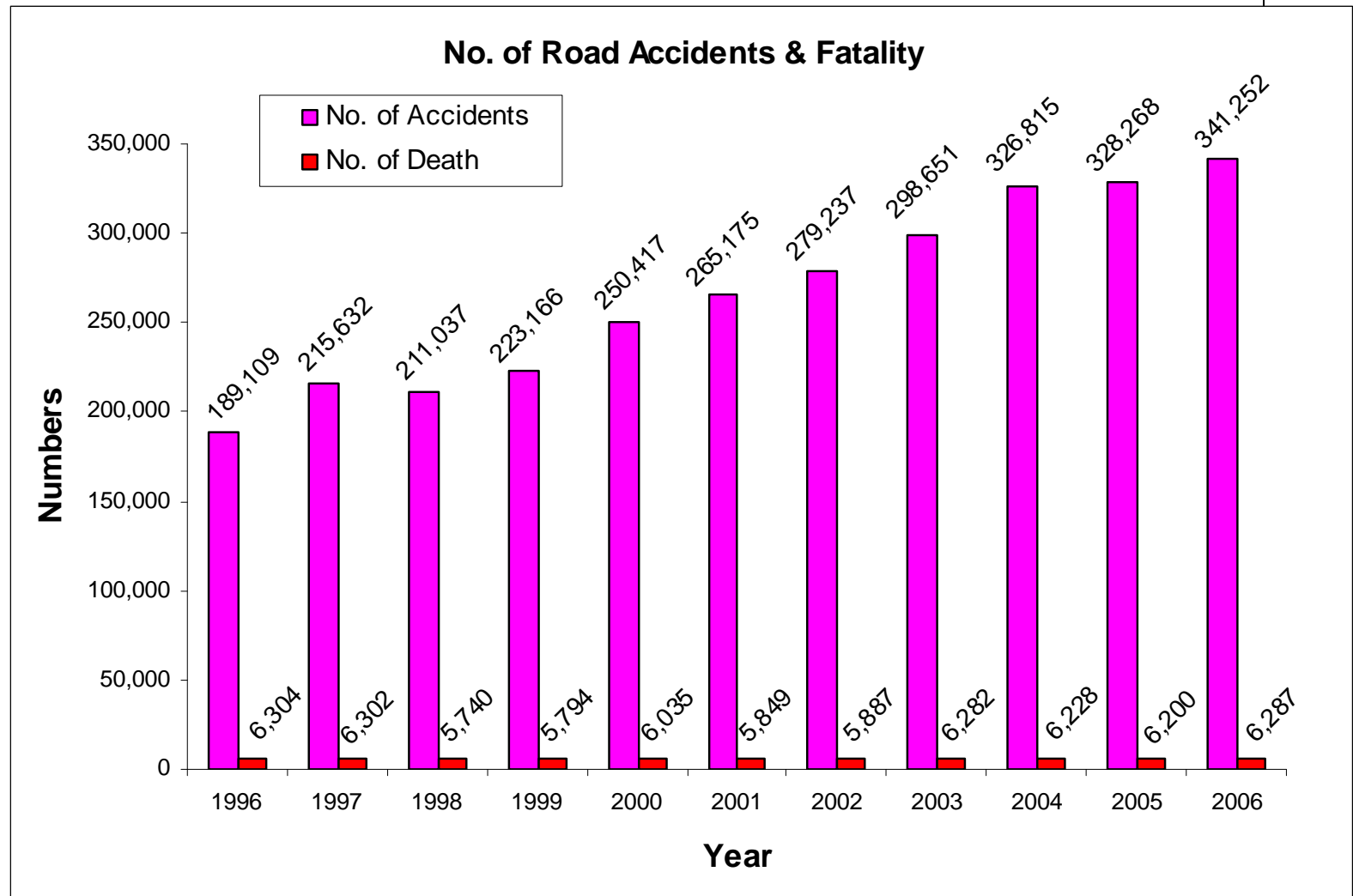
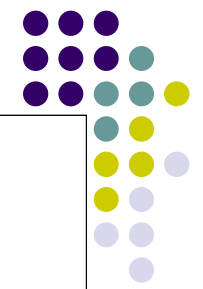


**Country Report  
Malaysia**



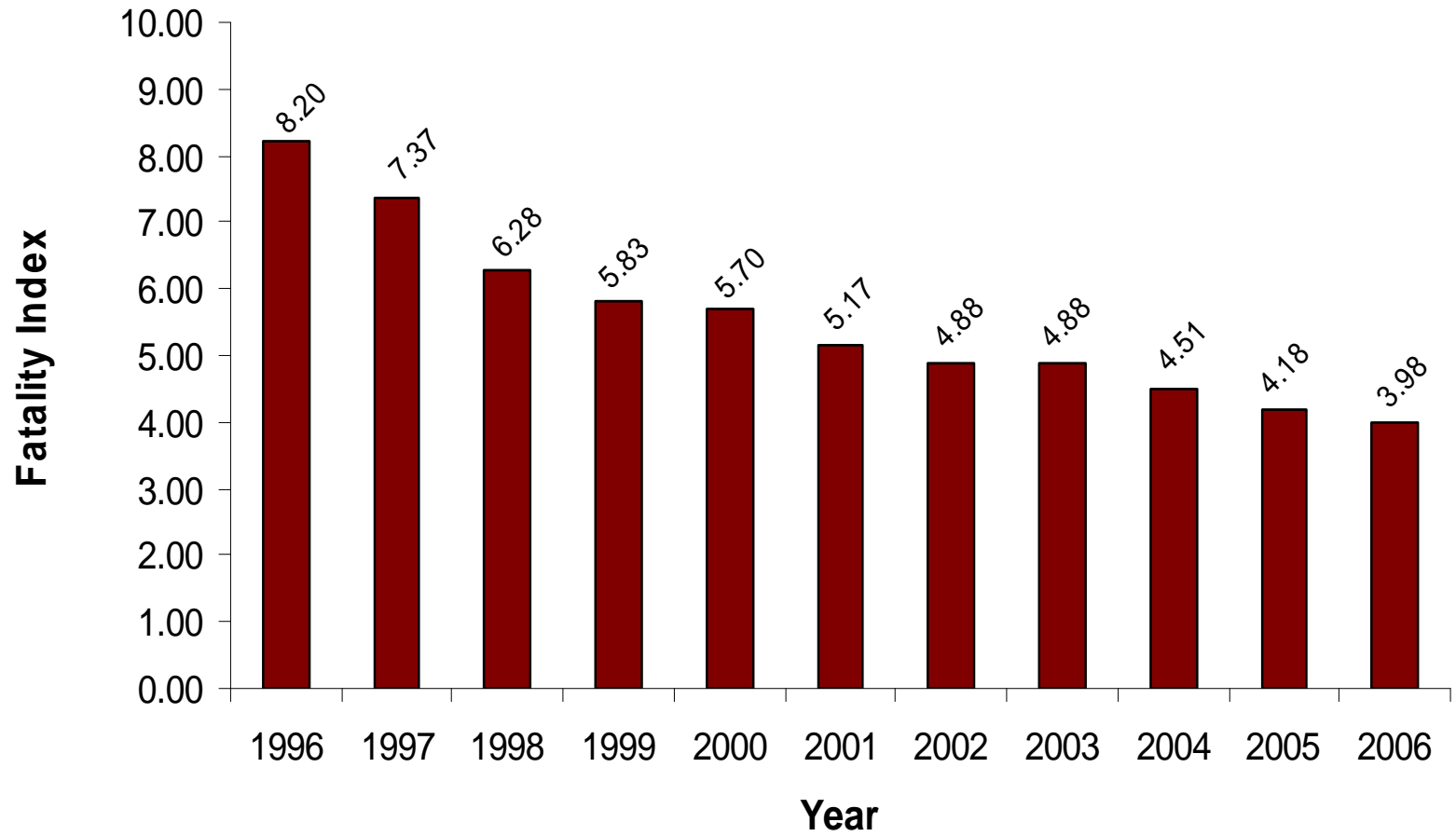


Source : Malaysian Institute of Road Safety Research (MIROS)



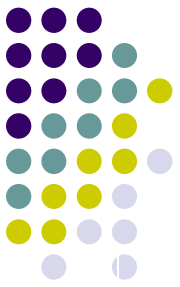
Source : Malaysian Institute of Road Safety Research (MIROS)

## Fatality Index Per 10,000 Vehicles



Source : Malaysian Institute of Road Safety Research (MIROS)

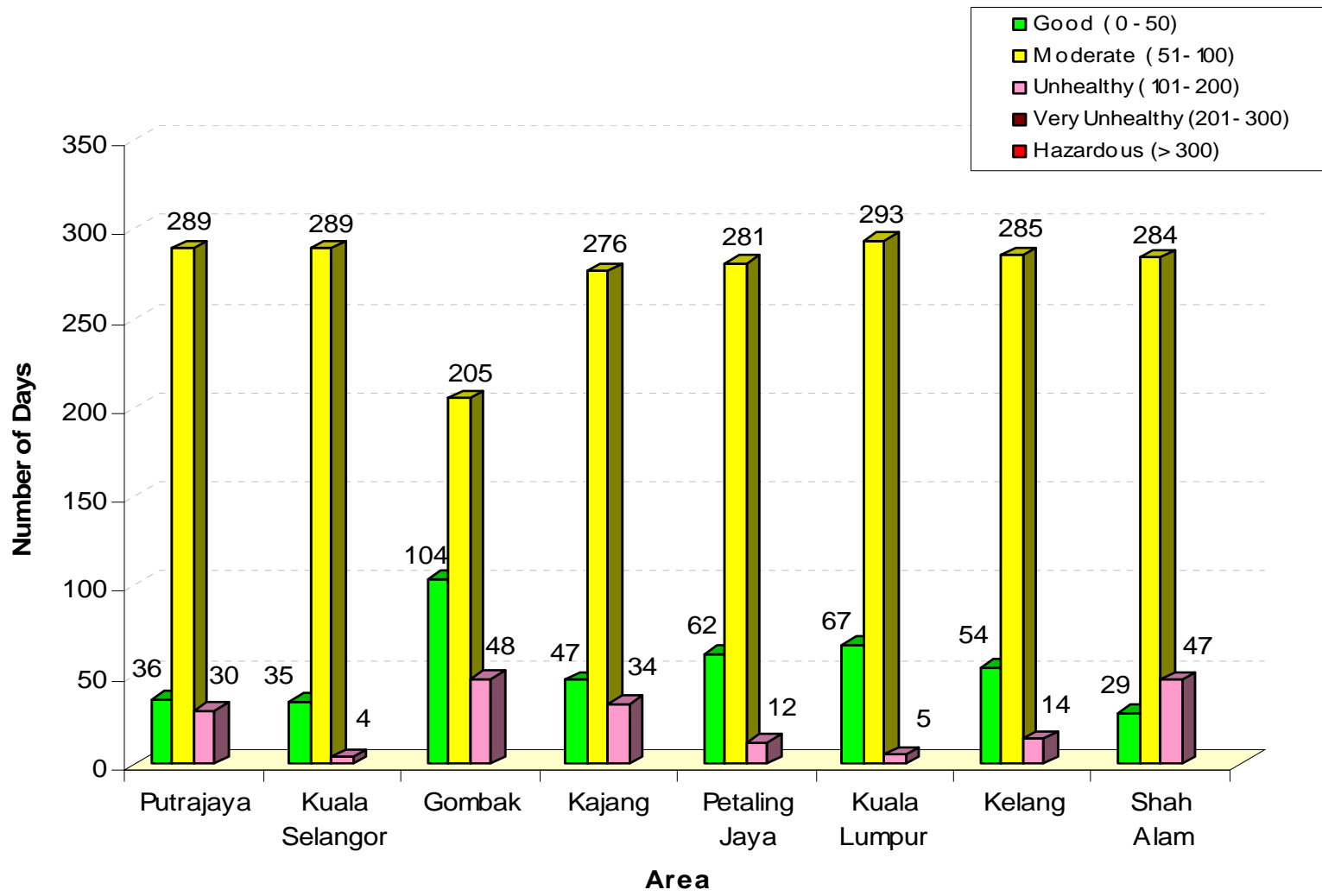
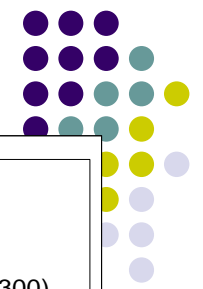
# *AIR QUALITY MONITORING*



**51 Automatic air quality monitoring stations throughout the country including road site of major cities.**

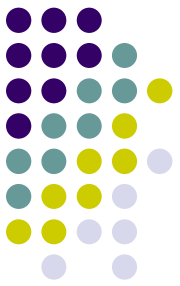
**Parameters monitored:  
PM<sub>10</sub>, CO, O<sub>3</sub>, NO<sub>x</sub>, SO<sub>2</sub>, Pb.**





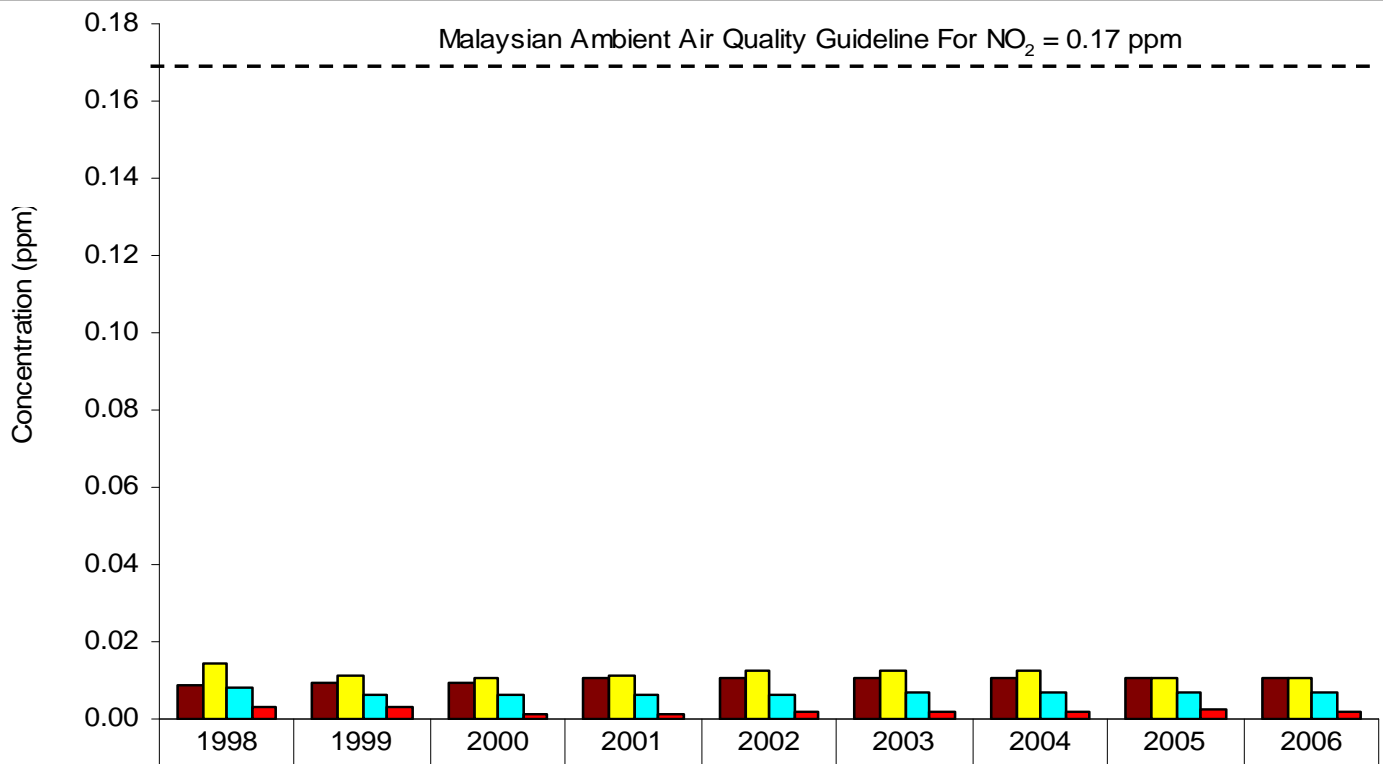
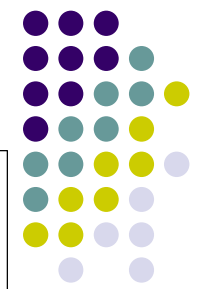
**Figure 1.2 Malaysia : Klang Valley Air Quality Status, 2006**

# Malaysia Air Emission Load and Pollutant Sources 2006



Pollutant	Overall emission load (tonnes)	Motor Vehicles	Industries	Power Plants	Others
CO	1,368,243	98%	1%	1%	-
SO <sub>2</sub>	194,265	9%	21%	50%	20%
PM	29,978	8%	25%	44%	23%
NO <sub>x</sub>	393,209	70%	24%	6%	-

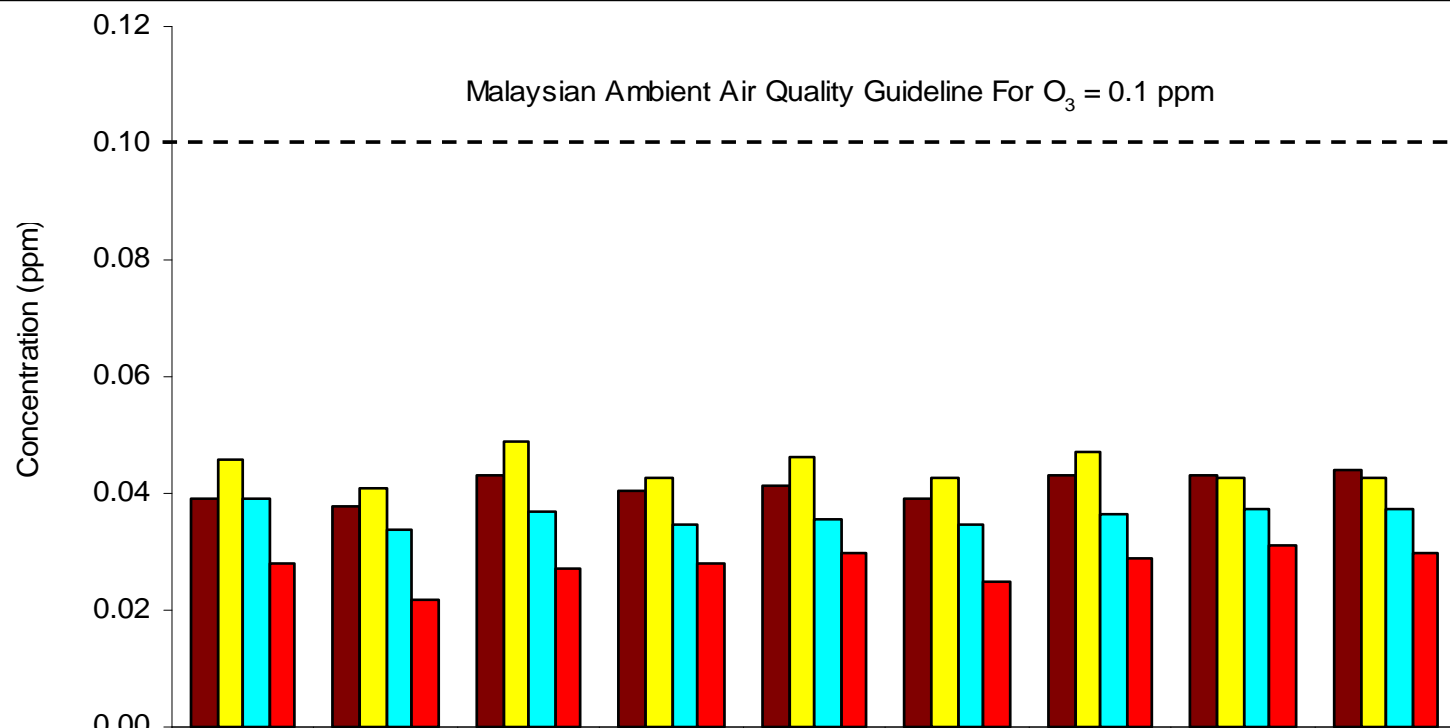
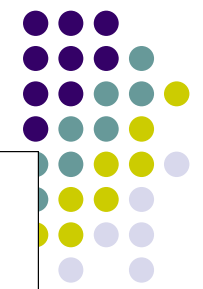
Source : DOE



	1998	1999	2000	2001	2002	2003	2004	2005	2006
■ Industrial	0.0089	0.0096	0.0093	0.0105	0.0106	0.0104	0.0105	0.0105	0.0105
■ Urban	0.0141	0.0112	0.0104	0.0113	0.0122	0.0123	0.0122	0.0106	0.0105
■ Sub Urban	0.0084	0.0062	0.0062	0.0062	0.0065	0.0066	0.0068	0.0069	0.0066
■ Background	0.0031	0.0030	0.0014	0.0013	0.0018	0.0017	0.0020	0.0026	0.0020

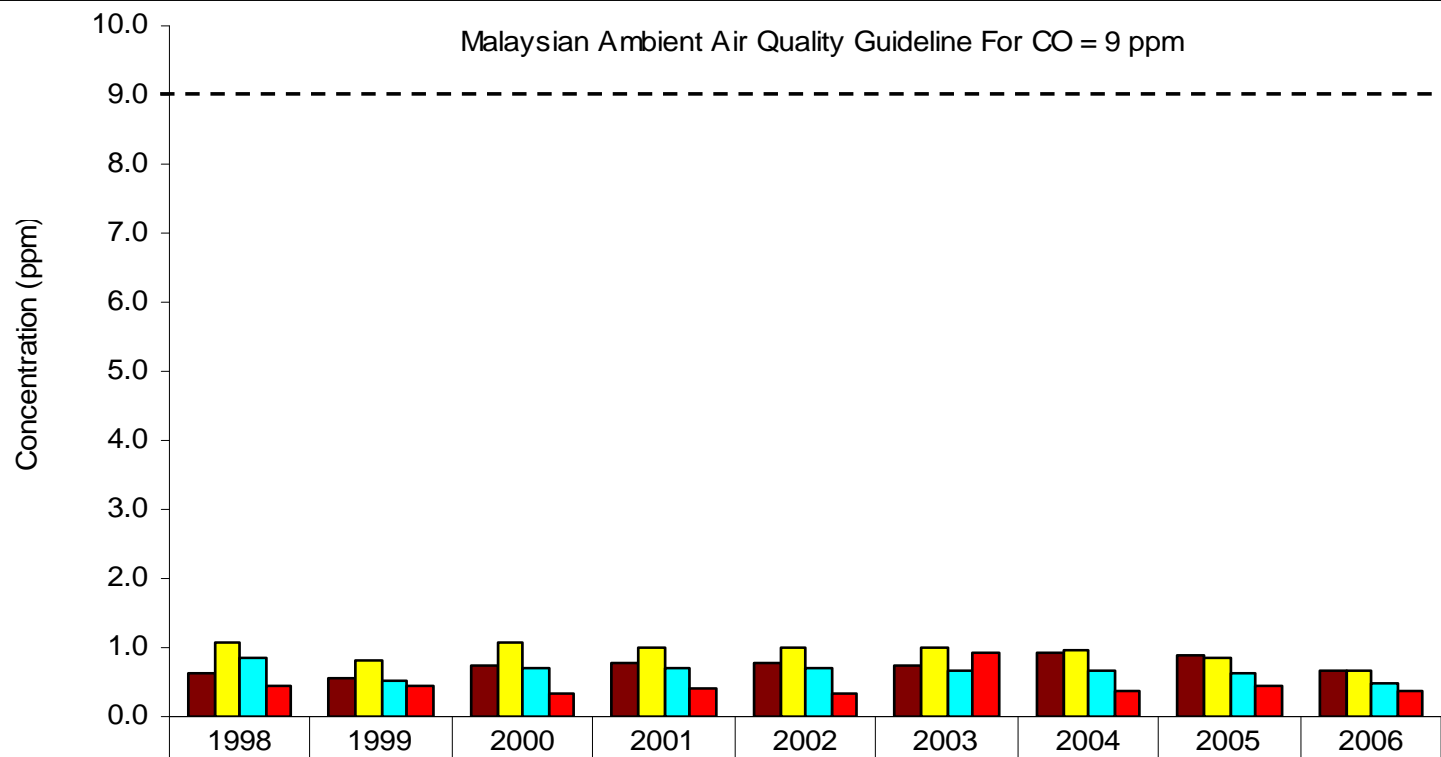
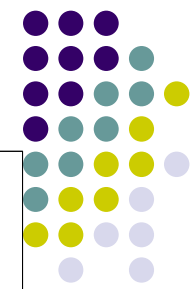
**Figure 1.8(a) Malaysia :**  
**Annual Average Concentration of Nitrogen Dioxide (NO<sub>2</sub>) by Land Use, 1998 - 2006**





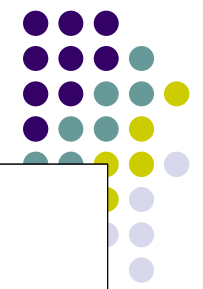
	1998	1999	2000	2001	2002	2003	2004	2005	2006
Industrial	0.0390	0.0380	0.0430	0.0405	0.0413	0.0389	0.0429	0.0431	0.0440
Urban	0.0460	0.0410	0.0490	0.0426	0.0461	0.0428	0.0471	0.0428	0.0429
Sub Urban	0.0390	0.0340	0.0370	0.0348	0.0355	0.0345	0.0363	0.0373	0.0371
Background	0.0280	0.0220	0.0270	0.0279	0.0298	0.0250	0.0287	0.0311	0.0300

**Figure 1.9(a) Malaysia :**  
**Annual Average Daily Maximum 1 Hour Concentration of Ozone (O<sub>3</sub>) by Land Use, 1998 - 2006**

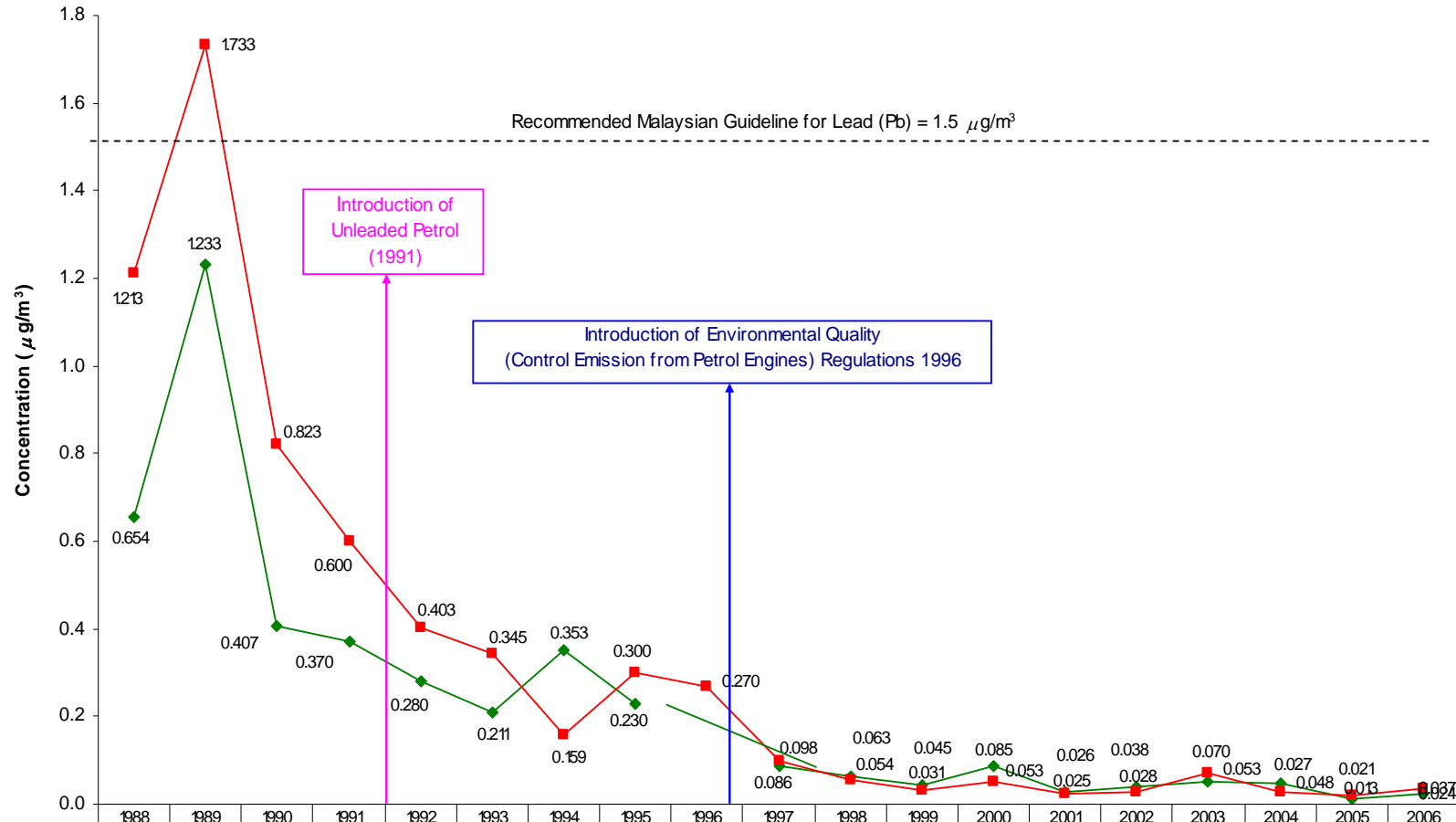


	1998	1999	2000	2001	2002	2003	2004	2005	2006
Industrial	0.6270	0.5550	0.7390	0.7614	0.7676	0.7405	0.9442	0.8734	0.6777
Urban	1.0670	0.8220	1.0710	1.0091	0.9934	0.9981	0.9632	0.8636	0.6526
Sub Urban	0.8450	0.5200	0.6890	0.7169	0.7187	0.6768	0.6784	0.6335	0.4763
Background	0.4360	0.4480	0.3470	0.3978	0.3182	0.9145	0.3700	0.4582	0.3840

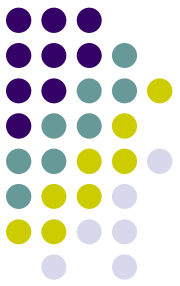
**Figure 1.10(a) Malaysia :**  
**Annual Average Concentration of Carbon Monoxide (CO) by Land Use, 1998 - 2006**



**Figure 1.11 Malaysia : Air Quality Trend : Ambient Lead Concentration in Klang Valley, 1988 - 2006**



	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
◆ DBKL	0.654	1233	0.407	0.370	0.280	0.211	0.353	0.230		0.086	0.063	0.045	0.085	0.026	0.038	0.053	0.048	0.013	0.024
■ Jalan Pudu	1213	1733	0.823	0.600	0.403	0.345	0.159	0.300	0.270	0.098	0.054	0.031	0.053	0.025	0.028	0.070	0.027	0.021	0.037

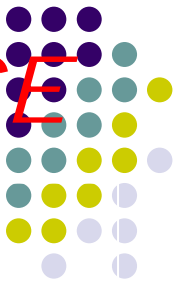


# *POLICY STATEMENT*

*Ninth Malaysia Plan (2006-2010)*

“Measures will be implemented to improve multimodal public transport, particularly in urban centres, to reduce traffic congestion and air pollution”

# *ROAD SAFETY & MAINTENANCE*



*Department Of Road Safety*

Established 8 November 2004

**Road Map 2005-2010**; reduce current fatality of 4.2 deaths per 10,000 vehicles to 2 deaths per 10,000 vehicles by 2010.

Supported by

*Malaysia Institute of Road Safety Research (MIROS)*

Established 3 January 2007

# CLEAN AIR ACTION PLAN



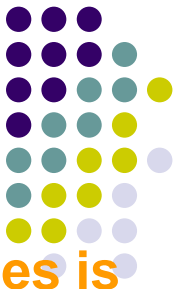
## NINTH MALAYSIA PLAN (2006-2010)

“A new Clean Air Action Plan will be developed and implemented to improve air quality”.

### Strategies:

- Reducing emission from motor vehicles
- Reducing emission from industries
- Tackling the haze problem
- Enhancement of human capital and capacity building
- Public Awareness





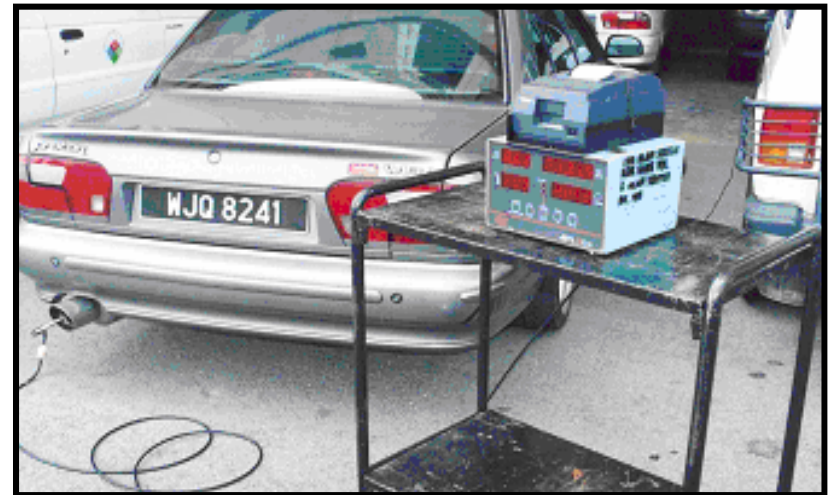
**Emission from motor vehicles is a significant source of air pollution in especially urban areas**



Diesel vehicle

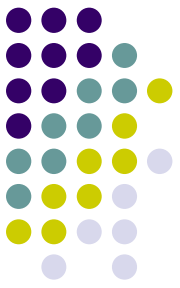


Motorcycle



Petrol vehicle

# ENFORCEMENT



- Environmental Quality (Control of Emission from Diesel Engines) Regulations 1996
- Environmental Quality (Control of Emission from Petrol Engines) Regulations 1996
- Environmental Quality (Motor Vehicle Noise) Regulations 1987



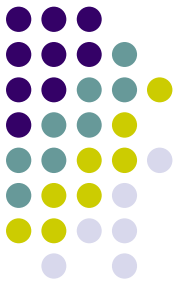


# VEHICLE EMISSION CONTROL AND I/M



- EURO 1 Standards for diesel vehicles and EURO 2 for petrol vehicles. Working towards EURO 2 and EURO 3 respectively.
- Mandatory six monthly inspection for safety and emission for commercial vehicles.





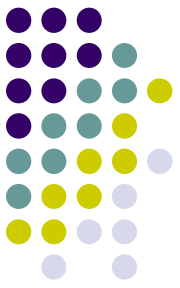
## *CLEANER FUEL*

- Lead free gasoline since 2000.
- ENVO Diesel (5% palm oil + 95% petroleum diesel) 21 March 2006.
- EURO 2 Fuel.

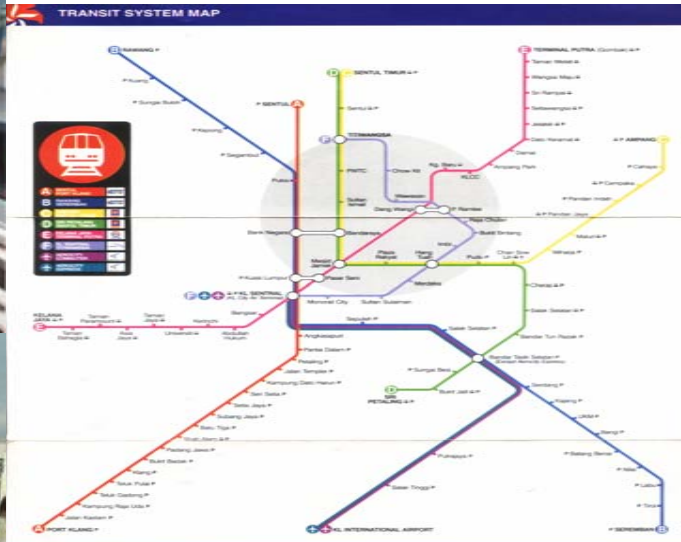
## **ALTERNATIVE FUEL**

NGV promoted since 1989, currently 30,600 NGV on the road.

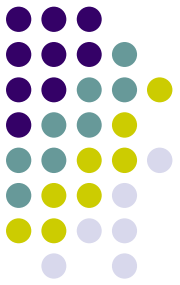
# PUBLIC TRANSPORTATION



- LRT and Monorail in Kuala Lumpur
- Commuter inter-city



# PUBLIC TRANSPORTATION

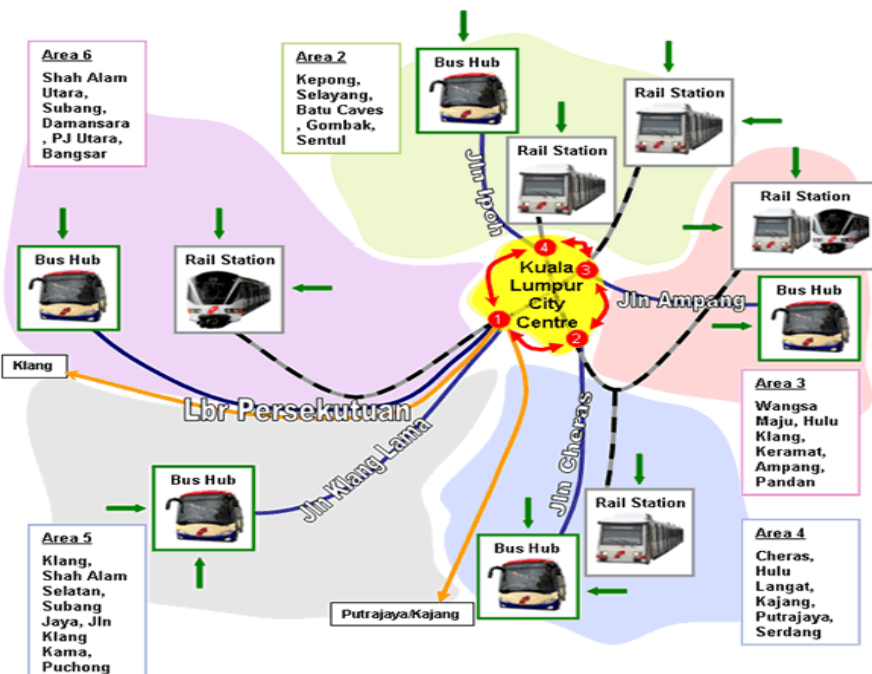


## RapidKL

- Integrated rail and bus system in the Klang Valley

4 million passengers per week

165 bus routes



# PUBLIC TRANSPORTATION



## Proposal

- LRT/monorail in Penang, Putrajaya and Johor Bharu
- Aerorail in Melaka

### Putrajaya needs LRT and monorail networks

Crucial links to township needed for the convenience of residents

By GEETHA KRISHNAN  
geetha@thestar.com.my

INFRASTRUCTURAL plans for an integrated transportation system in Putrajaya is in place but the crucial link is still missing. Putrajaya needs the monorail for an improved transport system within the federal administrative capital and a light rail transit (LRT) network to connect the city to the rest of Malaysia.

However, both projects listed in the township's master plan have been put on hold until the Government gives the green light.

This does not help the current situation in Putrajaya where parking spaces are limited and where people have taken to parking on main roads.

Putrajaya Holdings Sdn Bhd chief executive officer Adnan Abdul Karim said limited car parks prompted the Government to build more parking areas, causing traffic in Putrajaya to increase. This in turn led to higher fuel consumption and greater fuel subsidies that bur-

dened the Government even more. He was one of the working paper presenters at a two-day city-planning seminar entitled 'Creating a Livable and Vibrant Putrajaya', launched at the Putrajaya Corporation Complex in Precinct 3 by Federal Territories

AZLAN ABDUL KARIM



**Azlan:** The rail link runs from Putrajaya Sentral to Precincts 1, 2 and 3. The stations have been built but are merely shells.

Ministry secretary-general Datuk Ahmad Hishamuddin.

"If the proper systems are in place, a person from Gombak can travel to Putrajaya Sentral using the Express Rail Link and then travel on the LRT and monorail within here. Tourists and visitors can have better access to Putrajaya," he said.

"The rail link runs from Putrajaya Sentral to Precincts 1, 2 and 3. The stations have been built but are merely shells and there are tunnels as well. The other connection runs near the Putrajaya International Convention Centre (PICC)," Azlan added.

Putrajaya Corporation president Tan Sri Samsudin Osman said given the current situation, the local authority exercised some flexi-



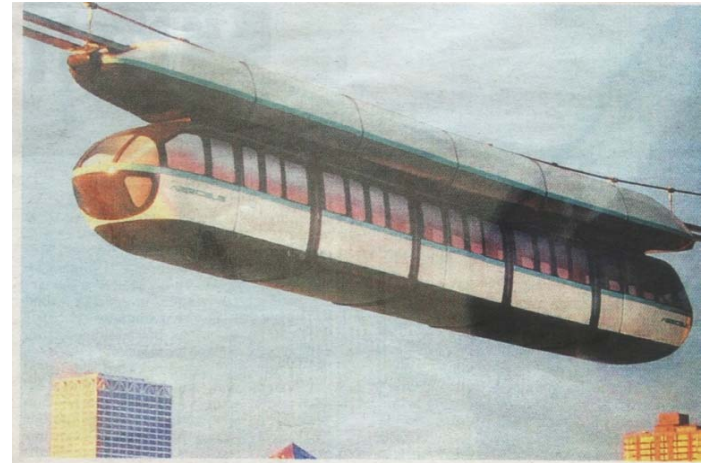
**Samsuddin:** Putrajaya has many plans to create a vibrant city but the needs of residents also matter.

bility in terms of enforcement when dealing with motorists who parked along road shoulders.

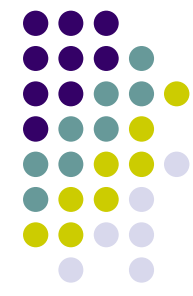
"But, we are also asking people to be civic-minded when parking their vehicles. Some want to park right outside Maybank for instance when we have ample parking at basement level," he said.

He added that Putrajaya has many plans to create a vibrant city but the needs of residents also matter to the local authority. Safety and security concerns were readily addressed.

The township will have a total of 170 closed-circuit television cameras. Eighty-five have been installed and 44 are functioning while 45 more will be upgraded. By August, 91 more will be added.



# OTHER MEASURES



- Toll
- Integrated Transport Information System (ITIS) - to monitor traffic flow & make available to road users in Klang Valley
- Congestion charges (proposed)



Integrated Transport Information System - ITIS  
A New Milestone in Traffic Management



### Tol dalam bandar

**Pengalaman bandar-bandar besar dunia menunjukkan bahawa sekiranya ingin mengurangkan kesesakan trafik, langkah-langkah berani seperti menghalang kemasukan kereta persendirian ke pusat bandar pada waktu puncak tidak dapat dielakkan.**

**Ministry to discuss proposal to beat traffic woes**

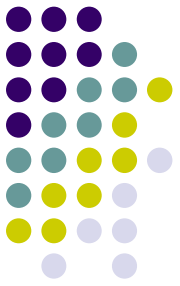
**KUALA LUMPUR:** A proposal to impose a congestion charge on vehicles in an attempt to reduce the city's traffic woes is still at the stage of consideration, Federal Transport Minister Datuk Abdullah Khalid said today.

He said the proposal would be discussed at the ministry level before a proposal is put to the Cabinet for approval.

Abdullah Khalid said a comprehensive study on the traffic conditions and congestion level had to be carried out before any decision can be made. But he said the proposal would be discussed at the ministry level before a proposal is put to the Cabinet for approval.

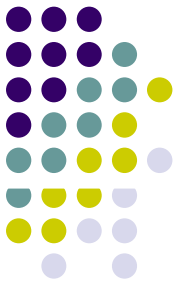
He said the proposal would be discussed at the ministry level before a proposal is put to the Cabinet for approval.

# CHALLENGES



- **Better Air Quality**
- **Efficient and safe public transport**
- **Reduction in road accidents and fatalities**





*Thank You*

