Informal document No. WP.29-148-25
(148th WP.29, 23-26 June 2009,
agenda item 6)

UNECE WP 29 Regulation Implementation in Malaysia: An Update

- Malaysia with UNECE Regulation Implementation
- Malaysia Current Status and Scenario
- National Setup towards UNECE Regulation Implementation

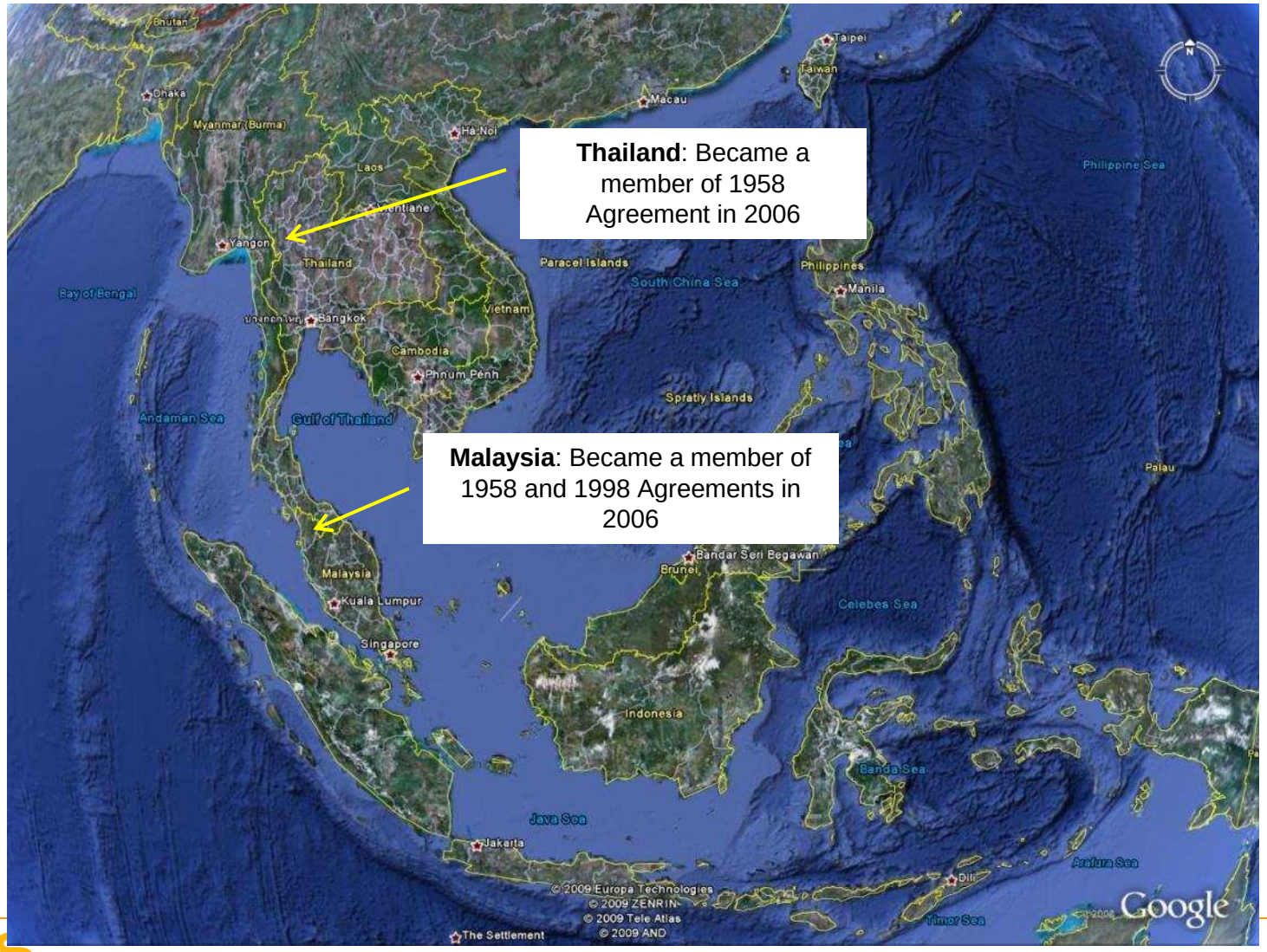
Malaysia's Involvement in UNECE WP29 Regulation

- Became a contracting party of:

1. 1958 Agreement (UNECE Vehicle Regulations) on 04 April 2006
2. 1998 Agreement (Global Technical Regulations) on 04 April 2006

- The first meeting of Malaysian Implementation Structure was held on 09 October 2007.
- Involvement from other Southeast Asian countries:
  - Thailand became a contracting party of 1958 Agreement in 2006
  - Others are not members but have shown interest

Involvement of Southeast Asian Countries



Thailand: Became a member of 1958 Agreement in 2006

Malaysia: Became a member of 1958 and 1998 Agreements in 2006


Kawasaki
Ford
YAMAHA
PEUGEOT
CHERY
RENAULT
ALFA ROMEO
TOYOTA
HYUNDAI
DAIHATSU
VOLVO
KIA
KIA MOTORS
FIAT
PERODUA
PROTON
MODENAS
BMW
inokom
NAZA GROUP OF COMPANIES
SUZUKI
CHEVROLET
HONDA
The Power of Dreams
Mercedes-Benz
mitsubishi
CITROËN
Audi
LEXUS
NISSAN
LAND ROVER


HINO


VOLVO


TATA


ISUZU


HICOM

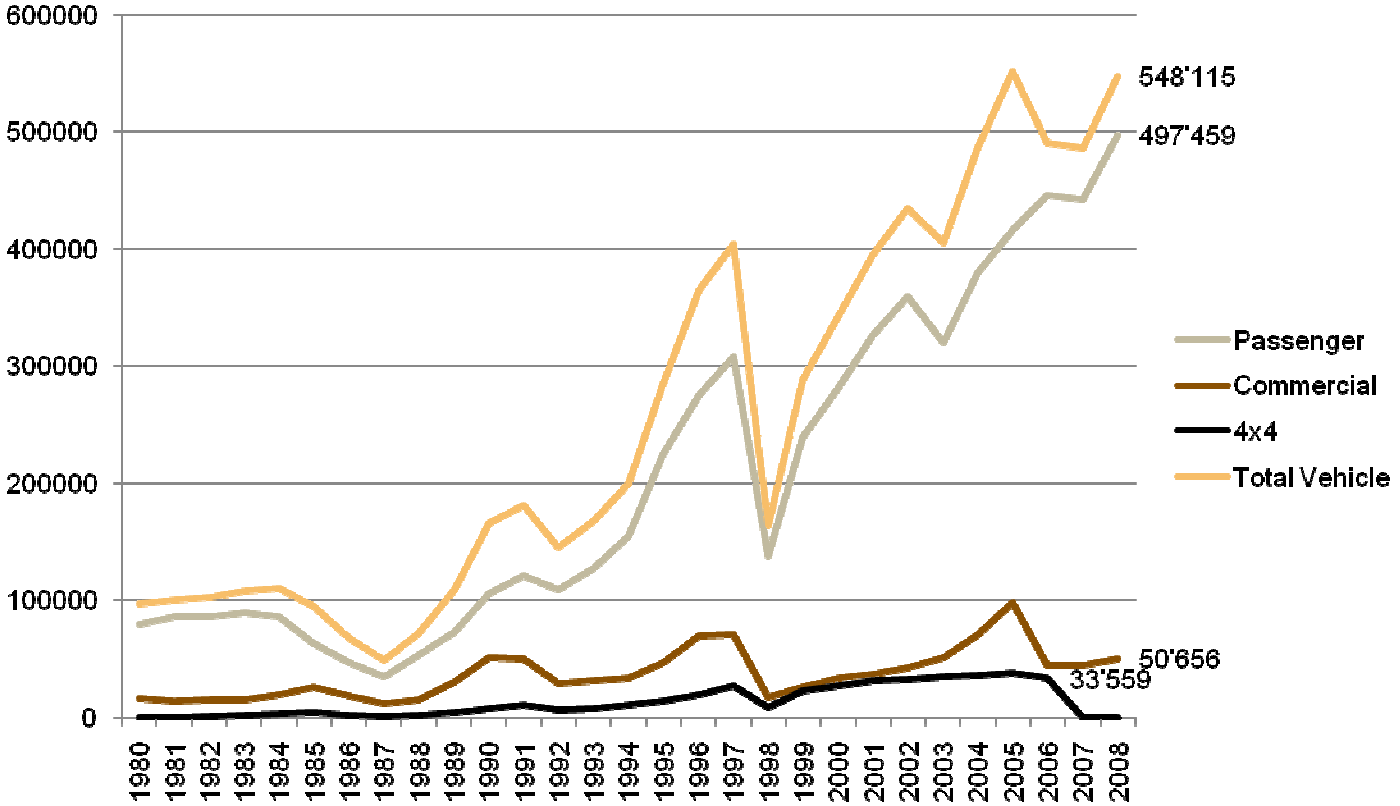

Mercedes-Benz


MAN


DODGE


SCANIA
Scania.svg

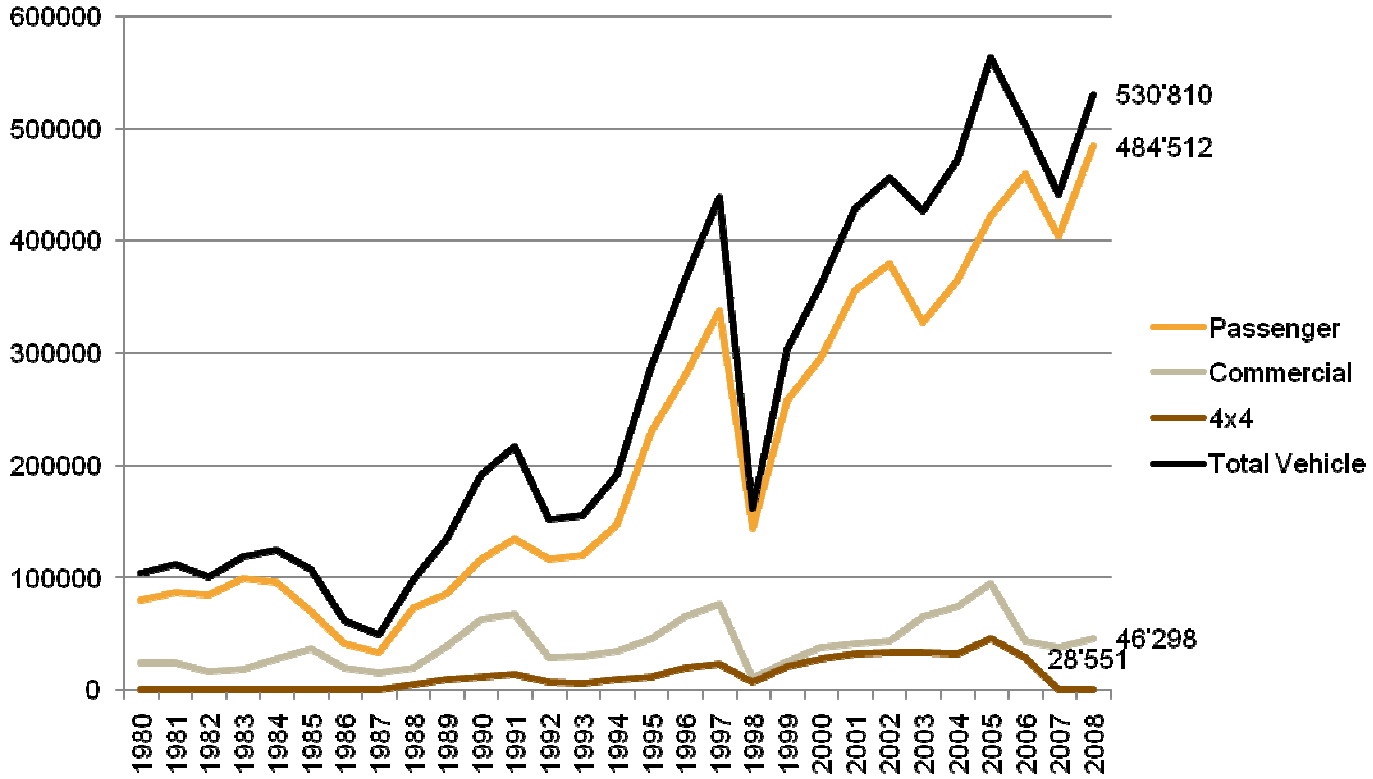
Vehicle Registration Trend



Summary of New Passenger Vehicles, Commercial Vehicles and 4x4 Vehicles REGISTERED In Malaysia for the Year 1980 to 2008

Ref: http://www.maa.org.my/info_summary.htm

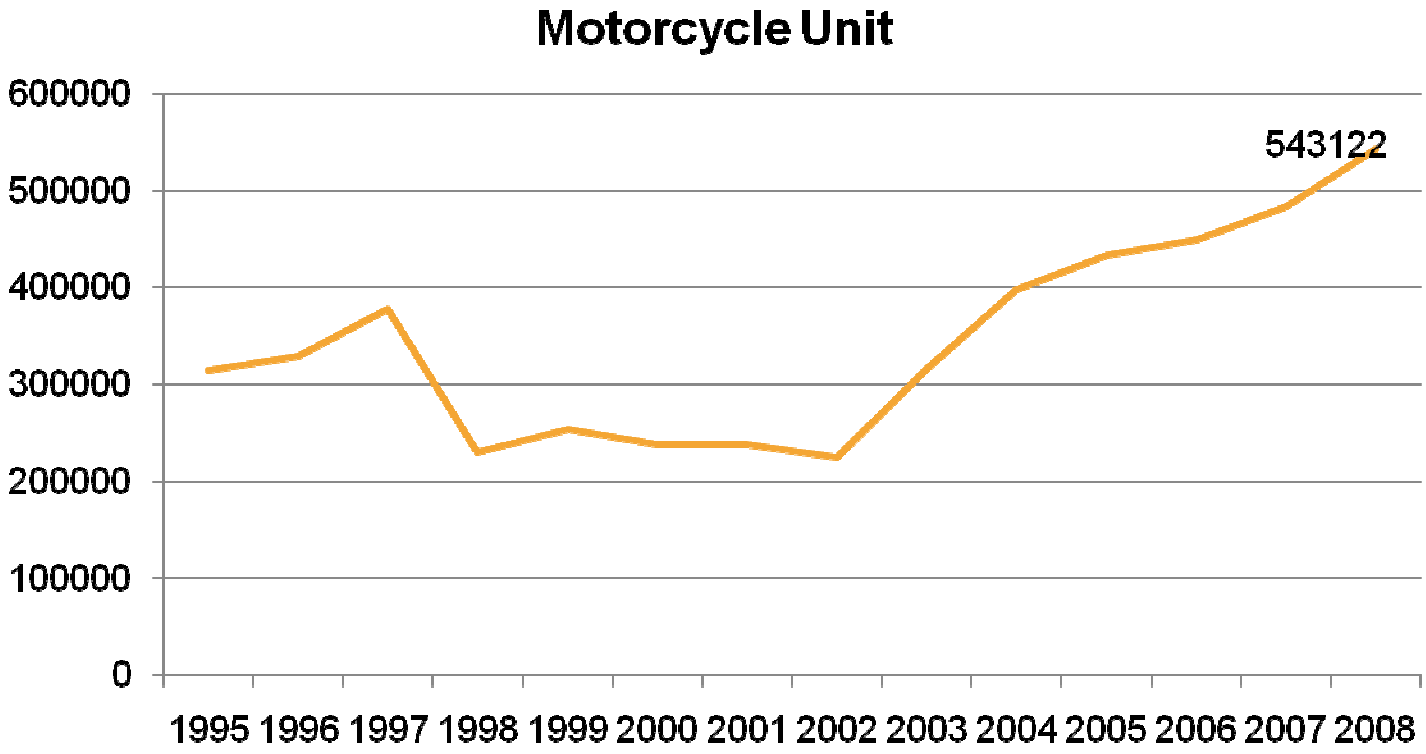
Vehicle Registration Trend



Summary of Passenger Vehicles, Commercial Vehicles and 4x4 Vehicles ASSEMBLED In Malaysia for the Year 1980 to 2008

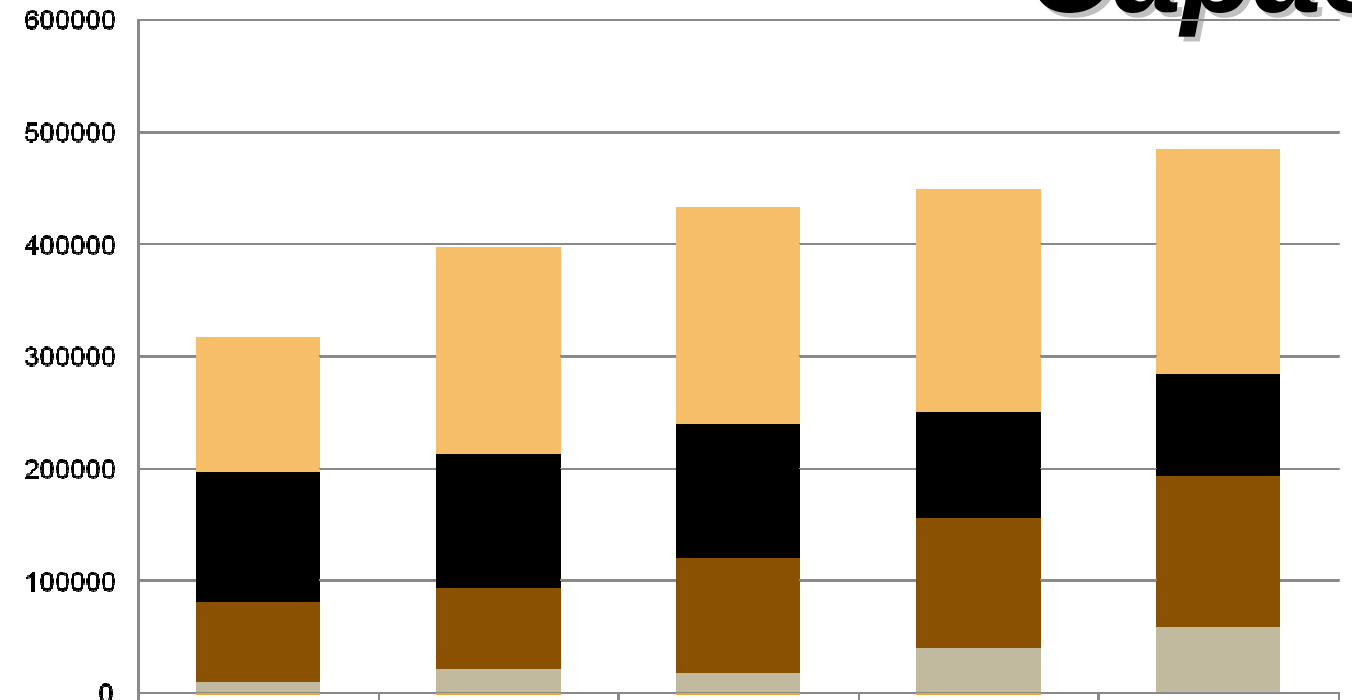
Ref: http://www.maa.org.my/info_summary.htm

Total Industry Volume for Motorcycle in Malaysia



Source: Motorcycle & Scooter Assemblers And Distributor Association of Malaysia and Road Transport Department Malaysia

Segmentation by Engine Capacity

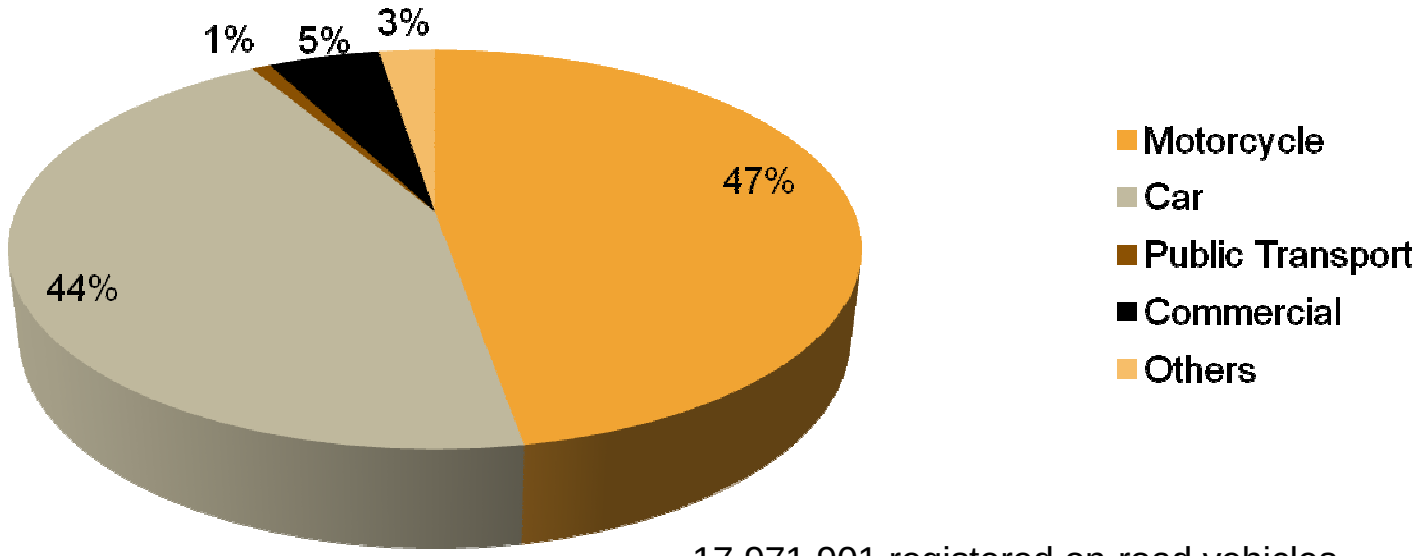


	2003	2004	2005	2006	2007
<100	119733	185187	193776	198236	200392
101-110	115509	119367	118349	94651	90091
111-125	71075	72296	103475	116479	134758
126-150	9772	20642	17308	39806	57232
>150	603	754	481	384	1903

Source: Motorcycle & Scooter Assemblers And Distributor Association of Malaysia and Road Transport Department Malaysia

Total Vehicle Population In Malaysia 2008

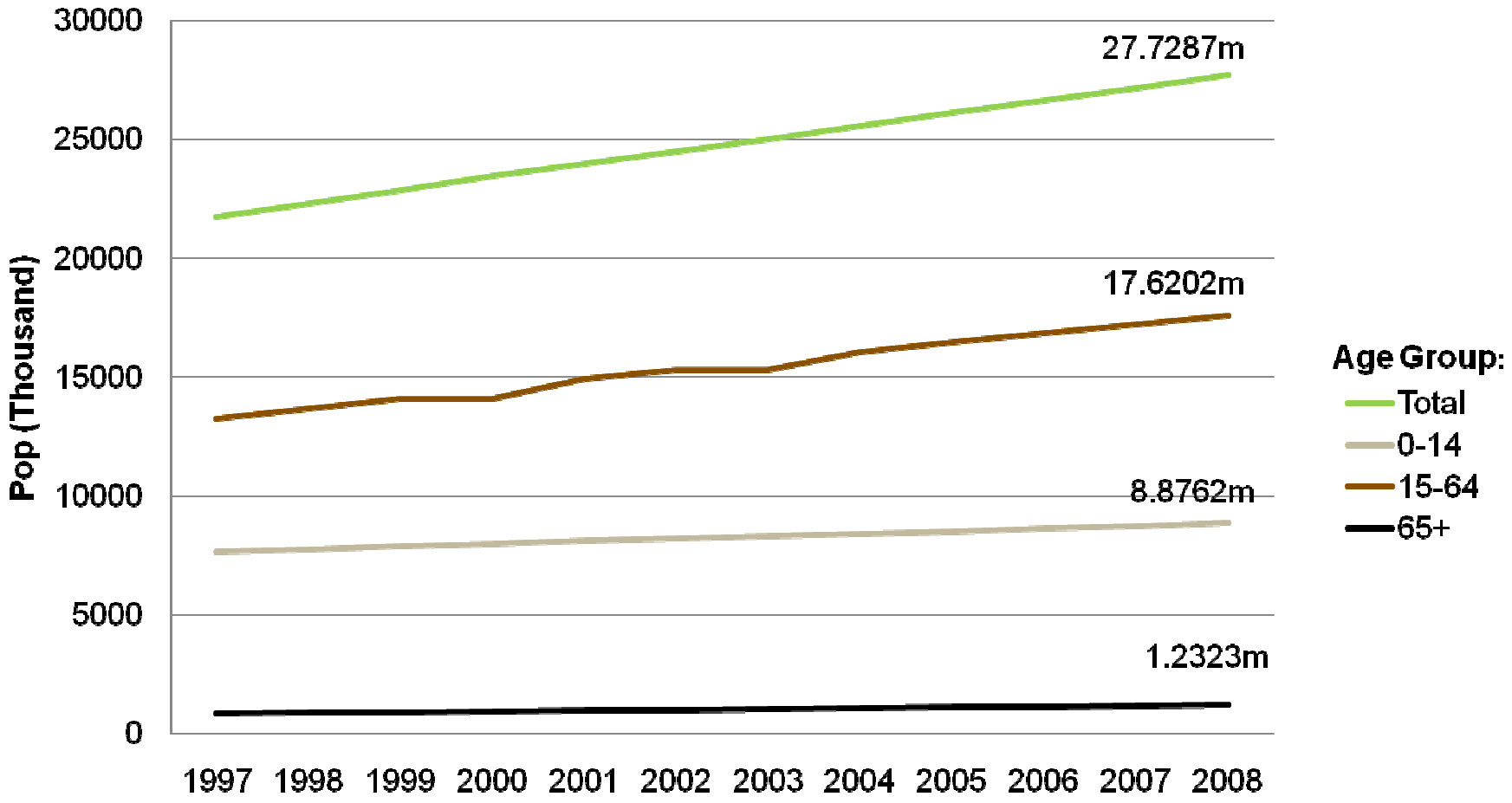
Cumulative Registration as in December 2008



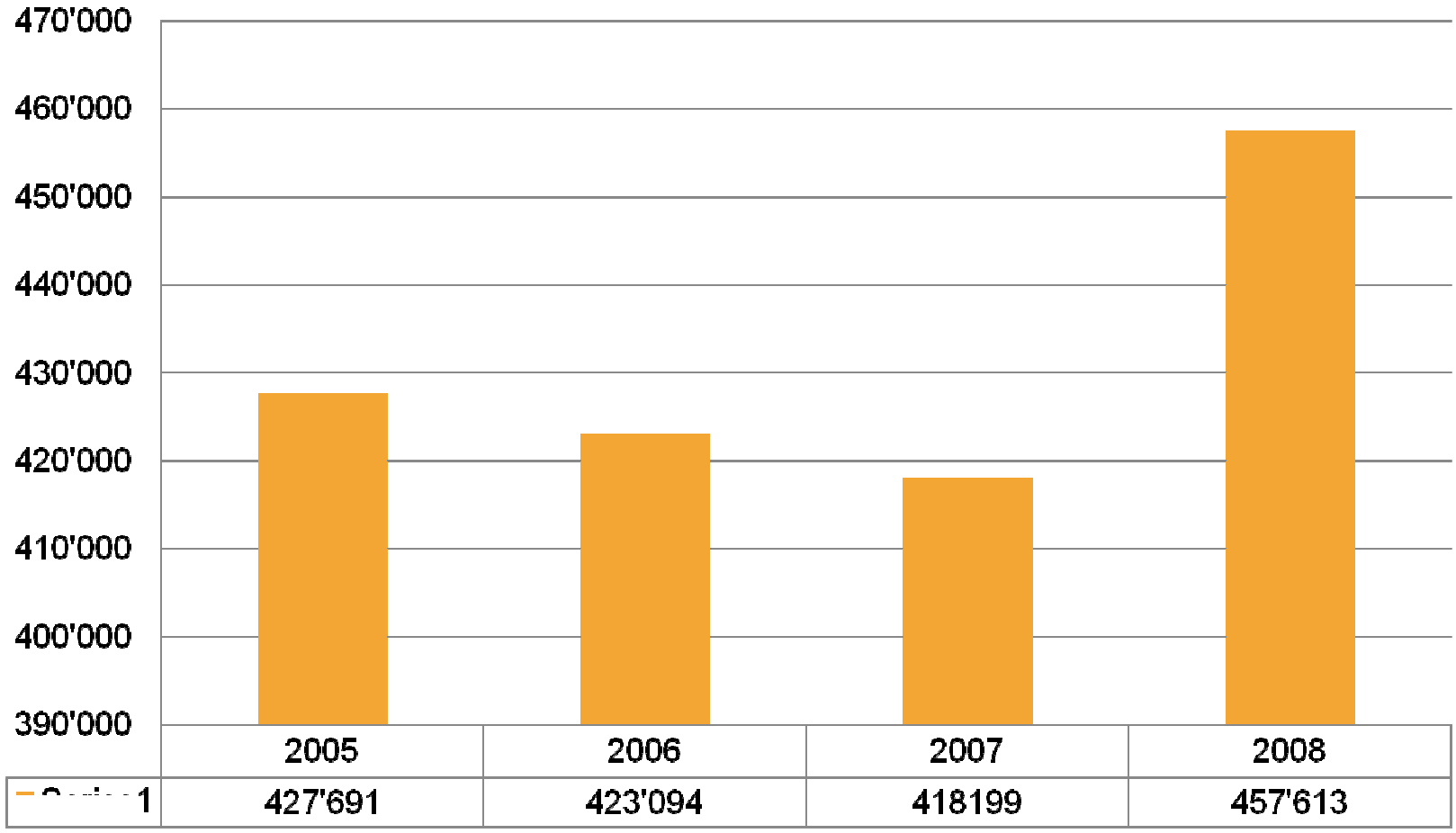
17,971,901 registered on-road vehicles

Source: Motorcycle & Scooter Assemblers And Distributor Association of Malaysia and Road Transport Department Malaysia

Population Trend



Driver Registration 2005-2008

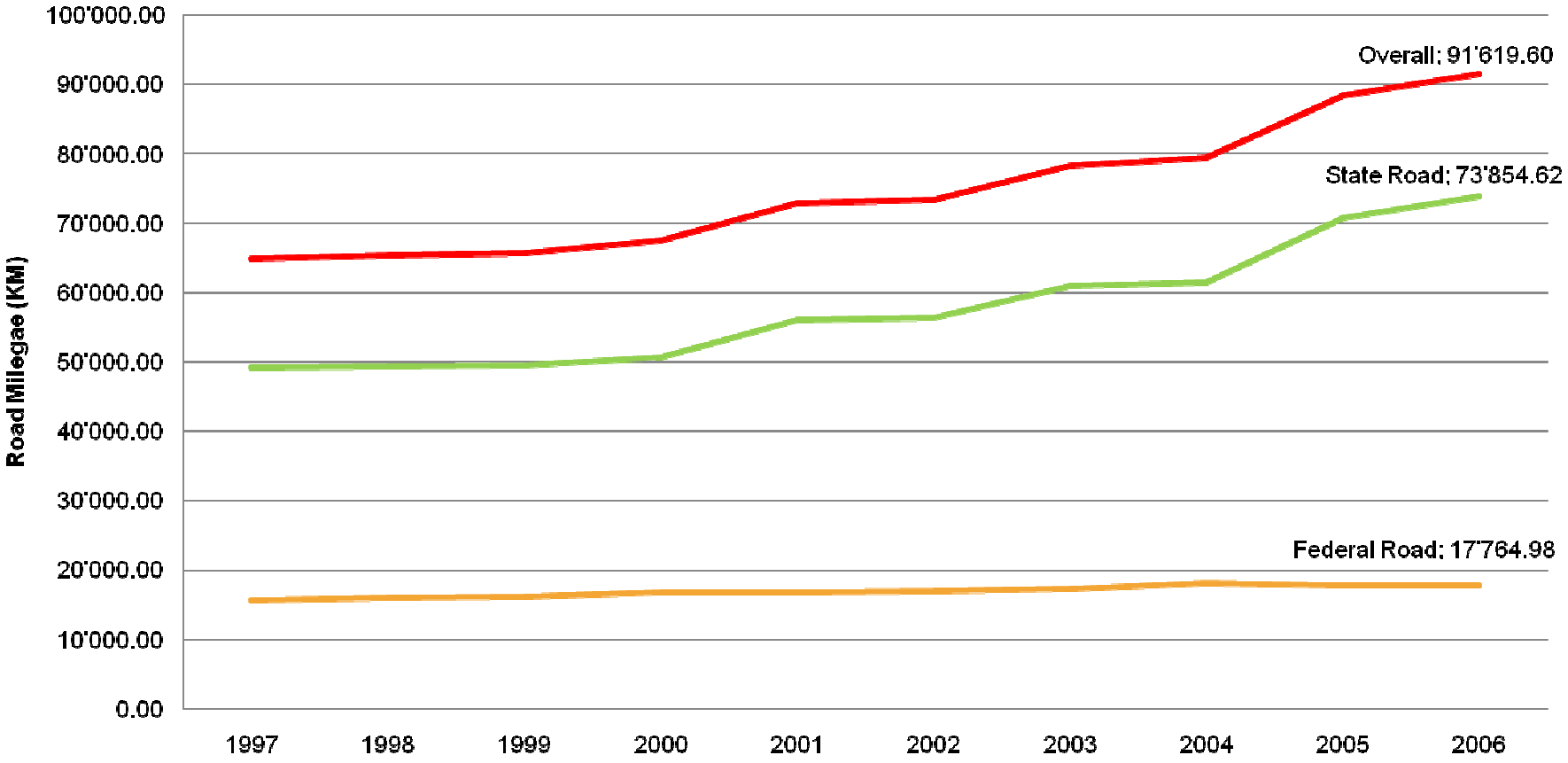


	2005	2006	2007	2008
Series 1	427'691	423'094	418199	457'613

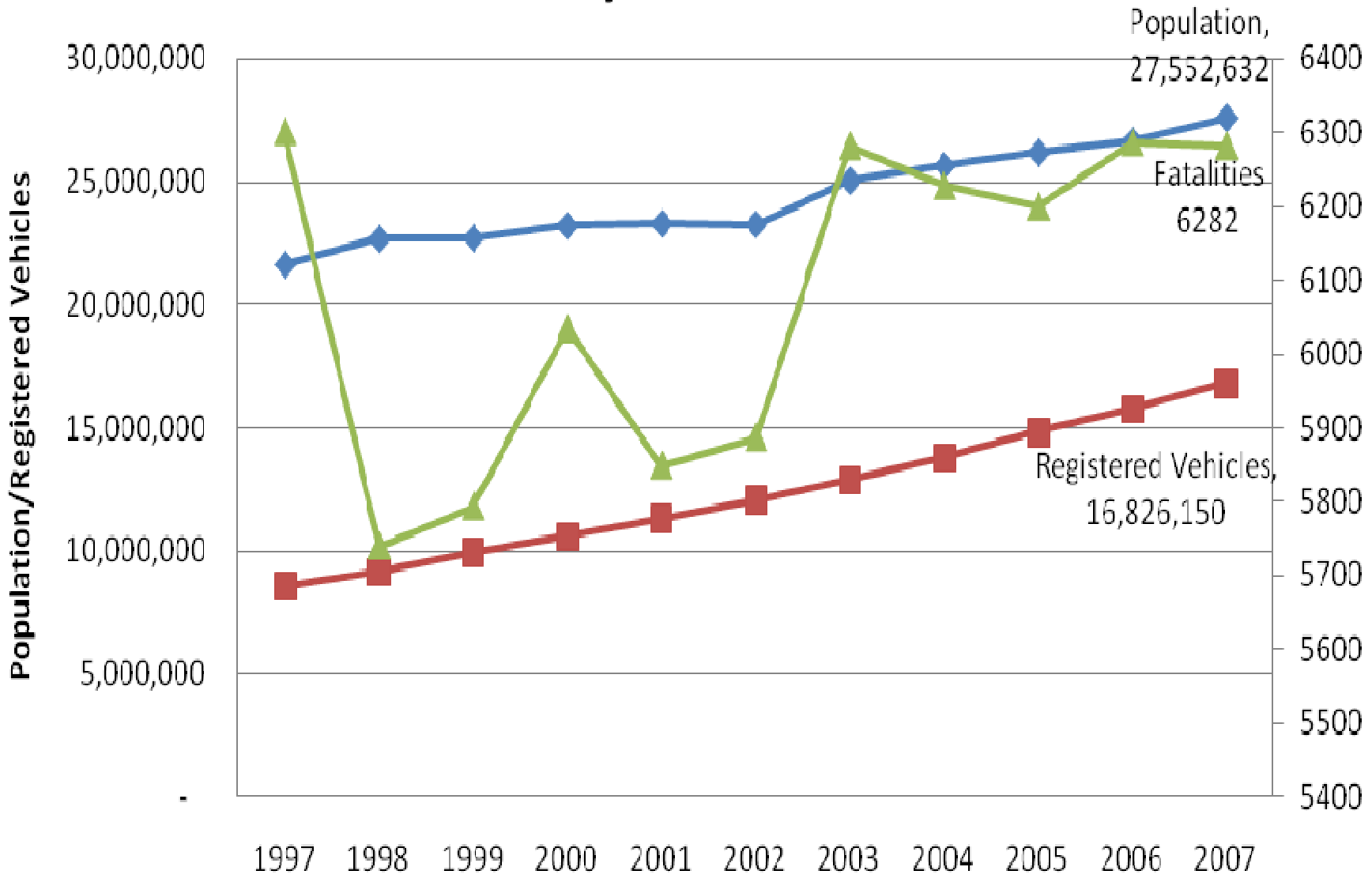
Cumulative Registered Drivers in 2008 - 11,227,144

Source:Road Transport Department Malaysia

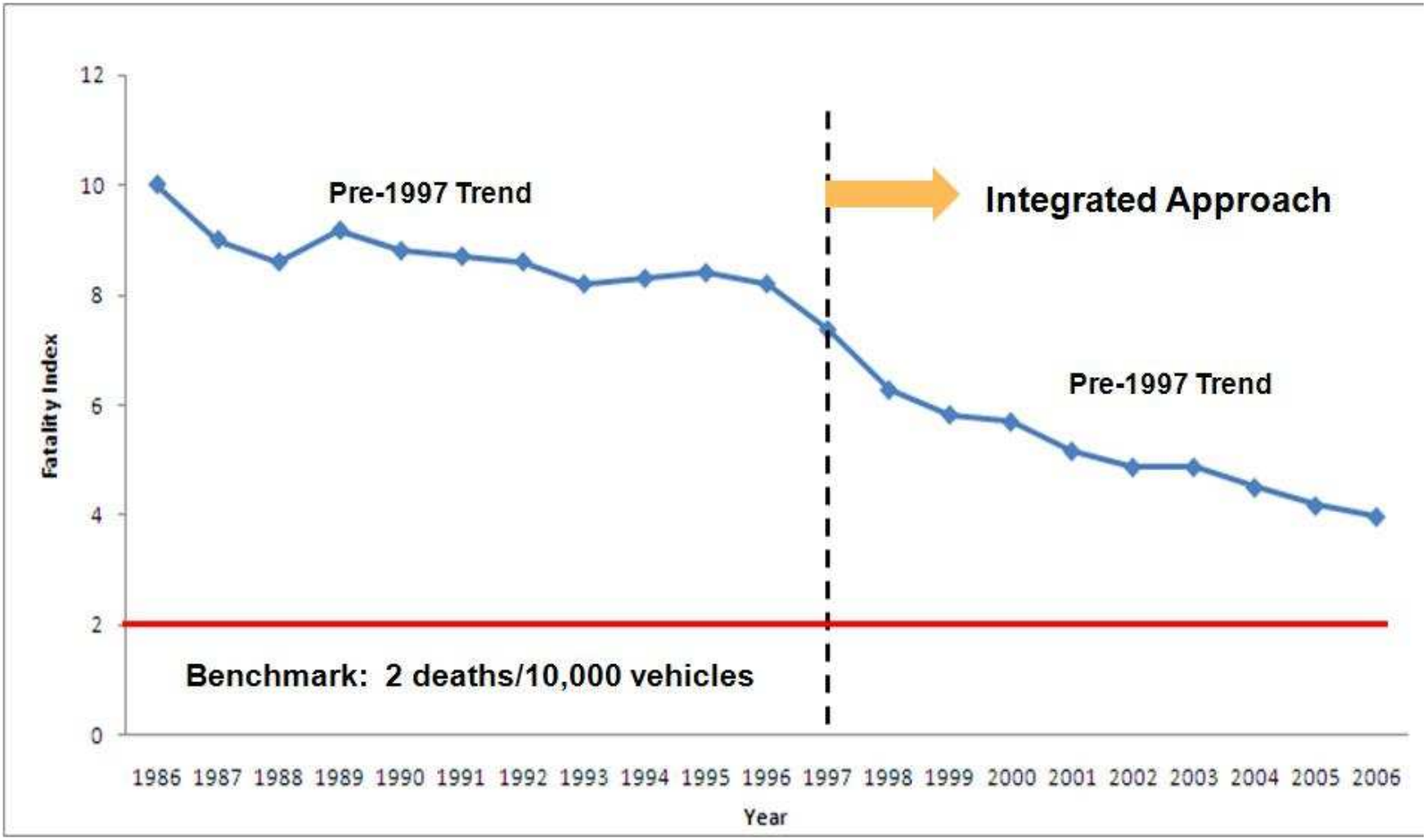
Road Trend


100'000.00
90'000.00
80'000.00
70'000.00
60'000.00
50'000.00
40'000.00
30'000.00
20'000.00
10'000.00
0.00
Road Milegae (KM)
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Overall; 91'619.60
State Road; 73'854.62
Federal Road; 17'764.98

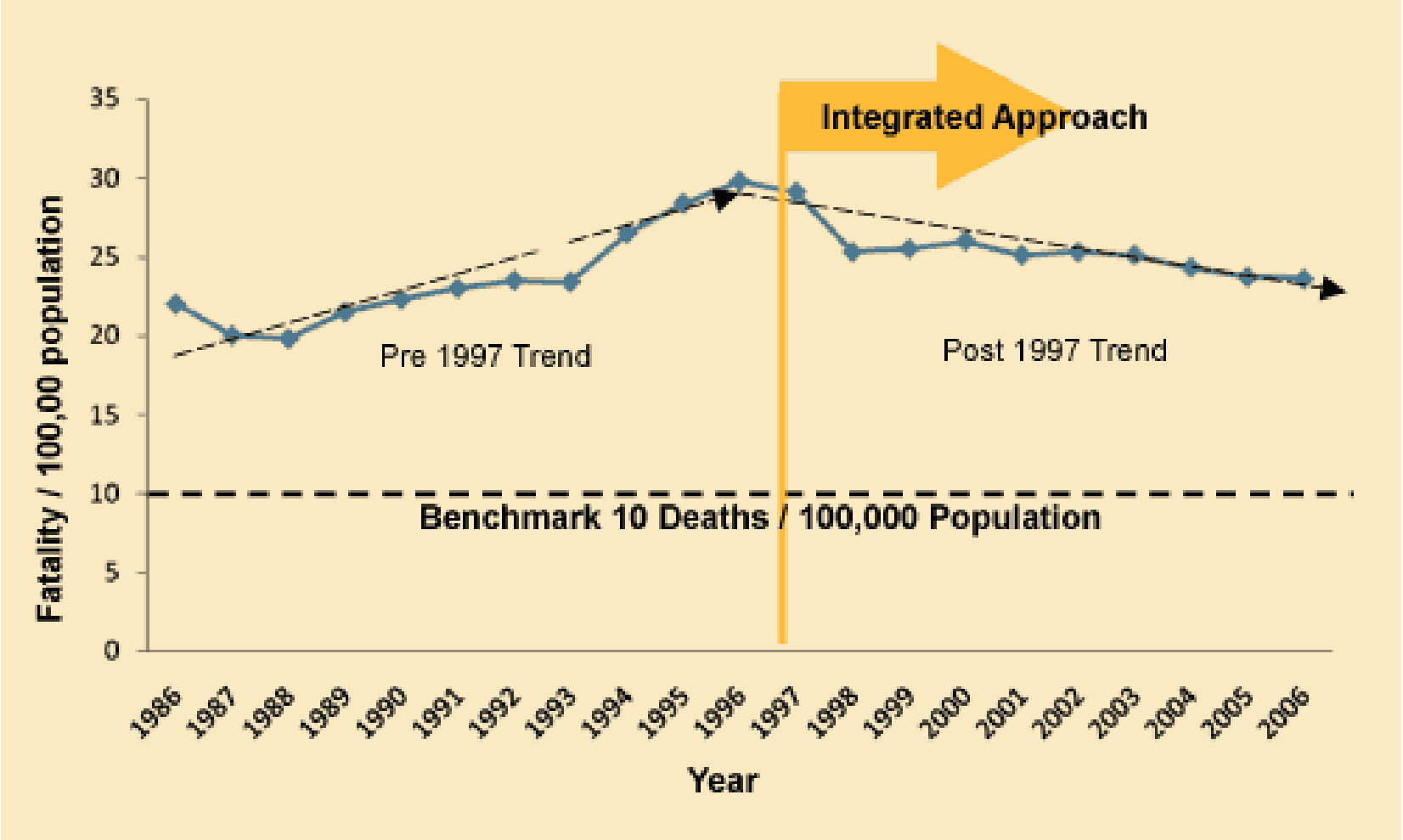
Malaysian Trends



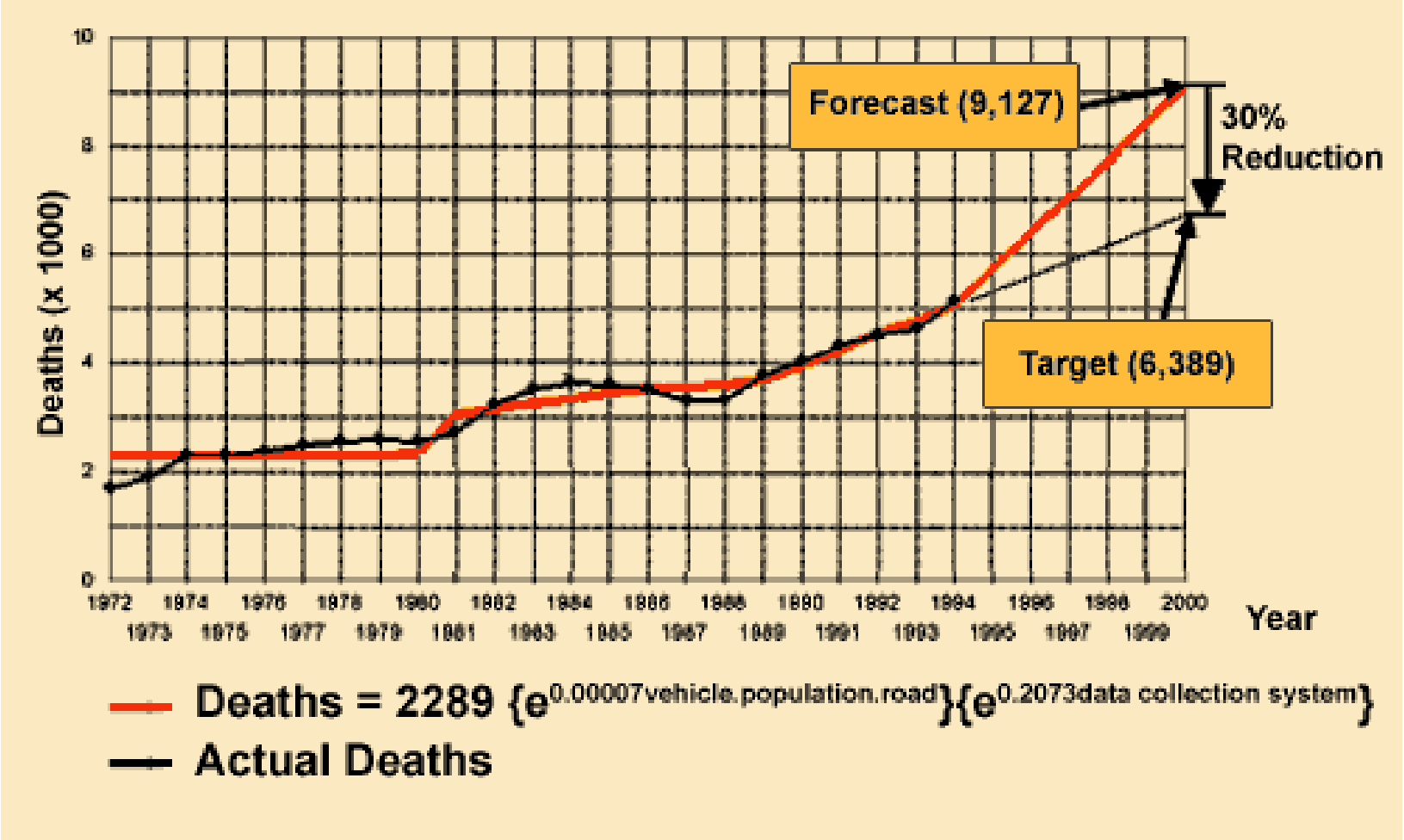
Fatality per 10,000 Vehicles - Estimated and Projected



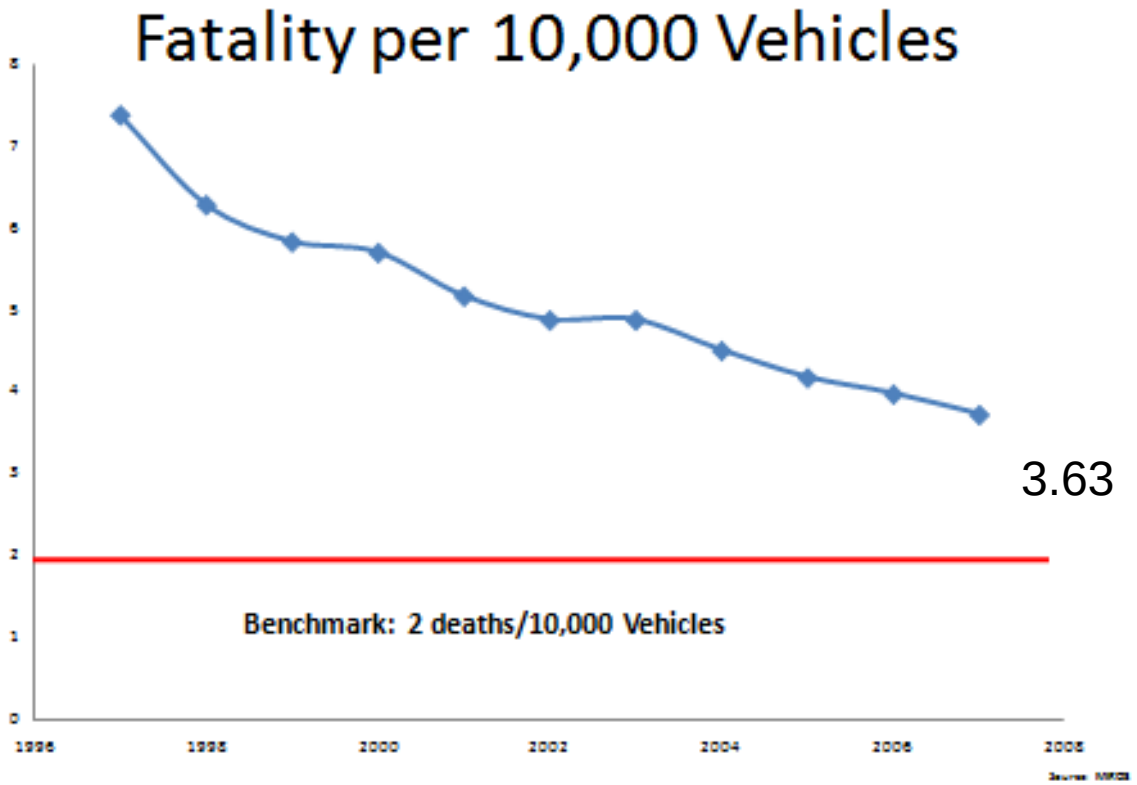
Fatality per 100,000 Population



Fatality Model and Safety Targets in Malaysia

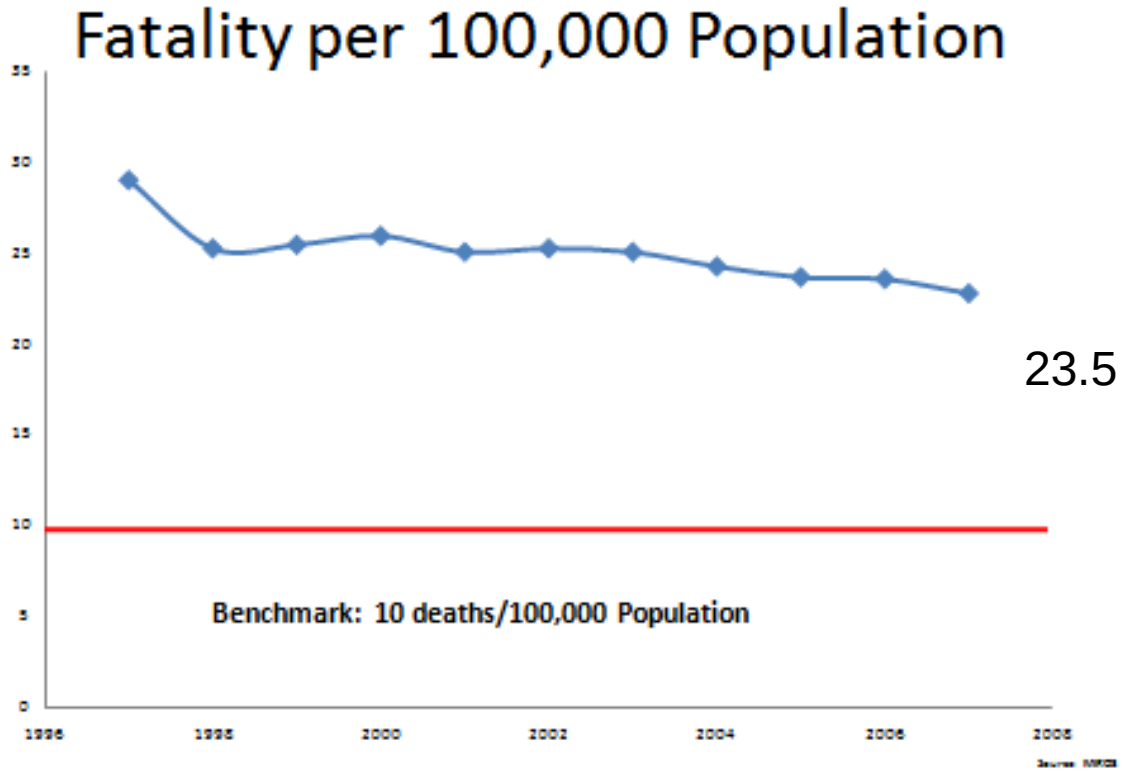


ROAD SAFETY PLAN OF MALAYSIA 2006 - 2010



MIROS
MALAYSIAN INSTITUTE OF ROAD SAFETY RESEARCH

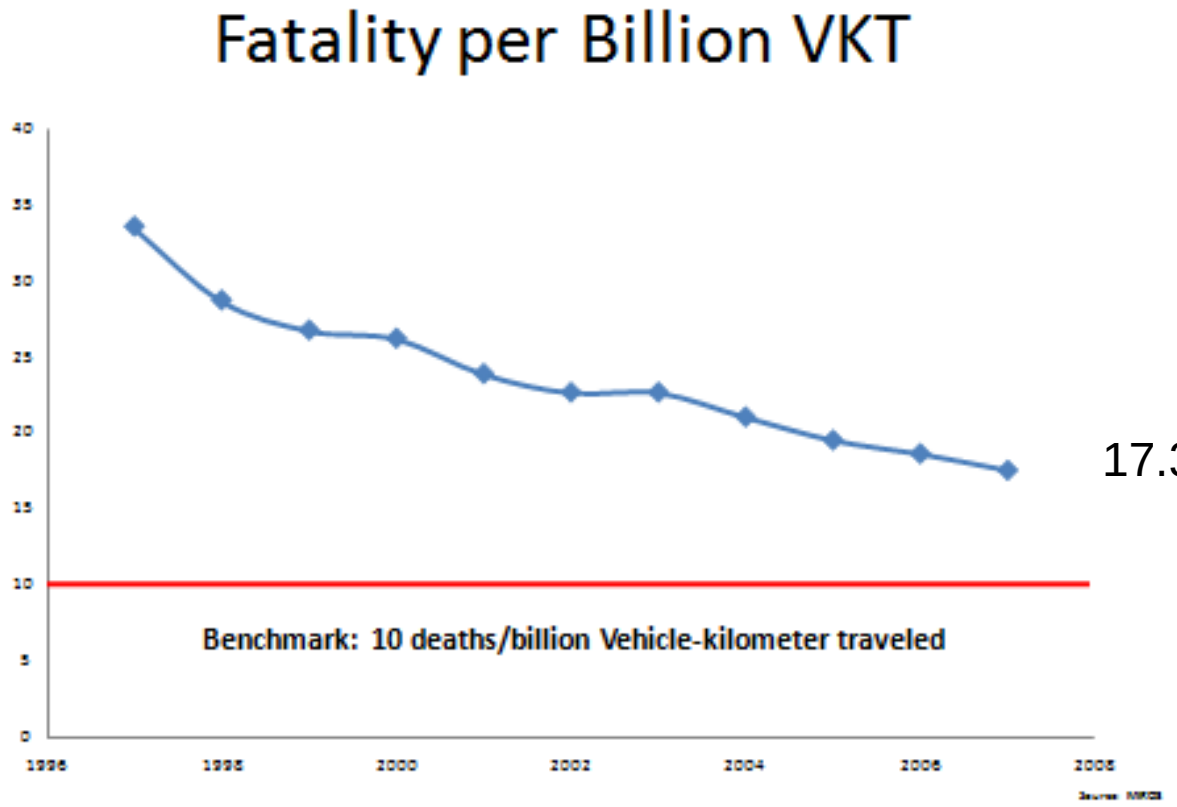
ROAD SAFETY PLAN OF MALAYSIA 2006 - 2010



23.5

MIROS
MALAYSIAN INSTITUTE OF ROAD SAFETY RESEARCH

ROAD SAFETY PLAN OF MALAYSIA 2006 - 2010



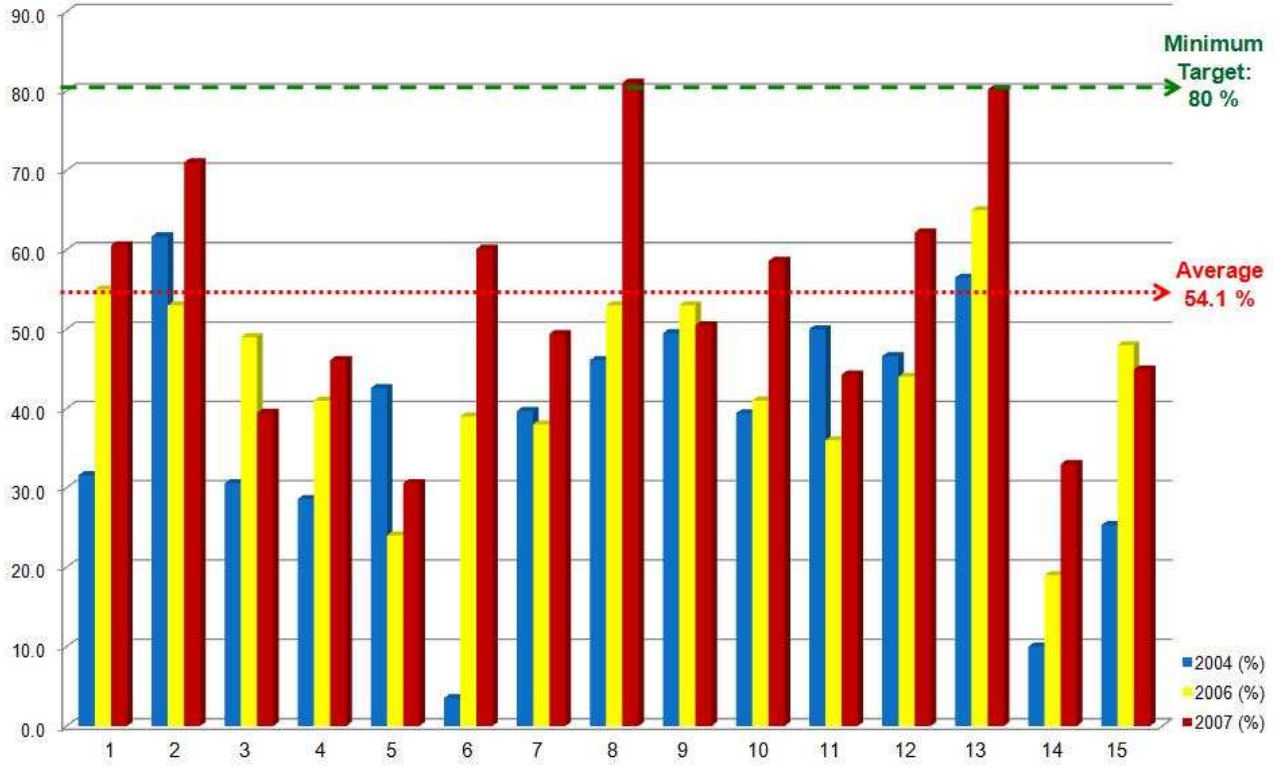
17.3

MIROS
MALAYSIAN INSTITUTE OF ROAD SAFETY RESEARCH

Malaysian Road Safety Strategic Planning-KPI Driven

1. Coordination and Management of Road Safety
2. Road Accident Data System
3. Road Safety Funding
4. Safe Planning and Design of Roads
5. Improvement of Hazardous Locations
6. Road Safety Education
7. Driver Training and Testing
8. Road Safety Campaign
9. **Vehicle Safety Standards**
10. Traffic Legislation
11. Traffic Police and Law Enforcement
12. Emergency Assistance to Road Accident Victims
13. **Road Safety Research**
14. Road Accident Costing
15. Partnership

Road Safety Key Performance Index (KPI) 2004 – 2006



1. Coordination And Management Of Road Safety
2. Road Accident Data System
3. Road Safety Funding
4. Safe Planning And Design Of Roads
5. Improvement Of Hazardous Locations
6. Road Safety Education
7. Driver Trainning And Testing
8. Road Safety Campaign
9. Vehicle Safety Standards
10. Traffic Legislation
11. Traffic Police And Law Enforcement
12. Emergency Assistance To Road Accident Victims
13. Road Safety Research
14. Road Accident Costing
15. Partnership

Bus Superstructure Issue:

KM 229.1 PLUS Expressway Bukit Gantang (13 Aug 2007) – 22 deaths

Crash configuration – an express bus swerved and ramped over the guardrail, ran down a concrete drain, fell into a 6m high culvert and came to a rest after it hit a large rock.

Damages on bus –

- Damage intrusion up to 4th passenger row – dismantled seats.
- Roof collapsed, bending and fractured pillars.

Errors –

- Rooftop frame – used welding technique instead of bonding together (failure on most pillars connecting roof structure.
- Critical corrosion problem – lifespan exceeded 20 years old.

Rest position of overturned bus.

Damage on the bus structure.

Bus Superstructure Issue:

KM 146.5 PLUS Expressway Tangkak (7 December 2008) – 10 deaths

Crash configuration – an express bus went to the road side's drain, hit the tree and went quarter-roll.

Damages on bus –

- Damage intrusion up to 4th passenger row – dismantled seats.
- Roof collapsed, bending and fractured pillars.

Errors –

- Rooftop frame – used welding technique instead of bonding together (failure on most pillars connecting roof structure.
- Critical corrosion problem

The bus

Damage on the bus structure.

Seat Anchorage and Seat Design Issue:

Jelapang North South Expressway Toll Plaza (11 Dec 2007) – 8 Deaths

Crash configuration – A bus rammed the rear end of a tanker lorry which was stopping at the toll plaza. The bus hit the concrete crash barrier at the toll booth before pivoting and had a direct impact with the left edge of the rear end of the lorry.

Issues

• Seat anchorage - shallow and weak anchorage (attached to the plywood floor) did not comply to ECE R80 standard

The 1st lane of the toll booth where the accident happened

Deformation of seat coordination in the bus

Rear Seatbelt Issue:

KM 13.8 Jalan Sungai Pelek – Port Dickson (7 Oct 2007) – 5 Deaths

Crash configuration – Toyota Harrier failed to control the vehicle resulting in the vehicle being in the opposite lane and ended up being rammed by the Nissan Diesel lorry from the side.

Damages of the 4wd – up to B-Pillar with rear nearside compartment still intact.

In the case, the rear seatbelts were available but were not used by the passengers. The survival chances of the passengers would have been much higher had they used rear seatbelts.

Damage on the front of the lorry

Damage extend from side view of car.

Rear Seatbelt Benefits:

KM 7.2 Alor Setar – Pokok Sena (31 Jan 2009) – 4 Deaths

Crash configuration – Perodua Kancil lost control, went to the opposite direction and ended up on having head-on collision with Suzuki Swift.

4 out of 5 Perodua Kancil died in the collision. Driver and front seat passenger of Kancil used the seatbelts but the occupants at the rear were not.

All 4 occupants of Suzuki Swift survived and all used the safety seatbelts.

Damage on the Perodua Kancil

Damage on Suzuki Swift

Underrun Protection Issue:

KM 96.2 East Coast Expressway (LPT) near Lanchang (24 July 2007) – 13 deaths

Crash configuration – An MPV came from behind and rammed into the rear end of a trailer laden with iron ore, broke the underrun, stuck on the trailer's back

Errors –

- Mismatch height geometry. Top of A pillar of the MPV was lower than the trailer's underrun bar
- Reduced survival space due to number of MPV's occupants was more than maximum allowed

Mismatch on Geometry Height

The wreckage view of the MPV after the Crash

Crash Compatibility Issue:

KM 45.5 Jalan Kuantan – Kemaman near Cherating (30 September 2007) – 7 deaths

Crash configuration – The accident happened when the driver of Ford Econovan failed to control the van after the van had negotiated a slight corner on the road and ended up having a frontal collision with the rear end of the PETRONAS oil tanker.

Total Damage on the Side of the Car

Minor Damage on the Front.

CRASH FINDINGS TRANSLATED INTO POLICY

1. Implementation of Rear Seatbelt Use in Vehicles
2. Strength of Superstructure (Large Passenger Vehicle)
3. Seats of Large Passenger Vehicles with regard to The Strength of The Seats and Their Anchorages

LIST OF GAZZETED UNECE REGULATIONS in NOV 2007

Item	Regulation No.	Regulation Title
1	30	Uniform Provisions Concerning The Approval of Pneumatic Tyres for Motor Vehicles and Their Trailers FMVSS Standard No. 109 New Pneumatic Tyres for Passenger Cars
2	36	Uniform Provisions Concerning The Approval of Large Passenger Vehicles With Regards to Their General Construction
3	48	Uniform Provisions Concerning the Approval of Vehicles With Regard to the Installation of Lighting and Light-Signalling Devices or MS ISO 303 : 2004 Installing of Lighting and Signalling Devices for Motor Vehicles and Their Trailers
4	52	Uniform Provisions Concerning The Approval of M2 and M3 Small Capacity Vehicles With Regard to Their General Construction
5	54	Uniform Provisions Concerning The Approval of Pneumatic Tyres for Commercial Vehicles and Their Trailers or Federal Motor Vehicles Safety Specifications (hereinafter referred to as “FMVSS”) Standard No. 119 New Pneumatic Tyres for Highway Vehicles other than Passenger Cars
6	66	Uniform Technical Prescriptions Concerning The Approval of Large Passenger Vehicles With Regard to the Strength of Their Superstructure
7	80	Uniform Provisions Concerning The Approval of Seats of Large Passenger Vehicles and of These Vehicles With Regard to the Strength of the Seats and Their Anchorages
8	98	Uniform Provisions Concerning The Approval of Motor Vehicle Headlamps Equipped with Gas-Discharge Light Sources
9	99	Uniform Provisions Concerning The Approval of Gas-Discharge Light Sources for Use In Approved Gas-Discharge Lamp Units of Power-Driven Vehicles
10	108	Uniform Provisions Concerning The Approval for the Production of Retreaded Pneumatic Tyres for Motor Vehicles and Their Trailers
11	109	Uniform Provisions Concerning The Approval for the Production of Retreaded Pneumatic Tyres for Commercial Vehicles and Their Trailers

Proposed Implementation of UNECE Regulations for 1 January 2011

- R83 - Exhaust Emission
- R51 - Noise Emission
- R13/13H - Brake Performance
- R16 - Safety Belts
- R14 - Safety Belts Anchorage
- R43 - Safety Glass
- R7 - Brake Lamp Performance
- R6 - Indicator Performance
- R112 - Headlamp Beam
- R48,R98,R99 - High Intensity Lamp
- R17 – Seats
- R30 – Tyres
- R28 - Audible Warning Devices
- R69 - Rear Marking Plates For Slow Moving Vehicles And Their Trailers

- R70 - Rear Marking Plates For Heavy And Long Vehicles
- R104 - Retro-Reflective Markings For Heavy And Long Vehicles
- R58 - Rear Underrun Protection
- R73 - Lateral Protection
- R93 - Front Underrun Protection
- R54 - Pneumatic Tyres (Commercial Vehicles)
- R108/R109 - Retreaded Tyres
- R80 - Seat (Large Passenger Vehicle)
- R36 - Construction Of Public Service Vehicle
- R52 - Construction Of Small Capacity Public Service Vehicles
- R66 - Strength Of Superstructure (Large Passenger Vehicle)

National Steering Committee

- Chaired by Secretary General of Ministry of Transport Malaysia
- Secretariat: Department of Road Transport Malaysia
- Members: Representative from related ministries, lead government agencies, industries and NGOs.

National Vehicle Type Approval Committee

- Chaired by DG of Department of Road Transport Malaysia
- Secretariat: Automotive Engineering Division of DRT
- Members: Representatives from related agencies

National Expert Working Groups

- 6 National Working Groups
- Mirror of Working Parties of WP29
- Identified Chair organization and secretariat
- Experts from related agencies and industries

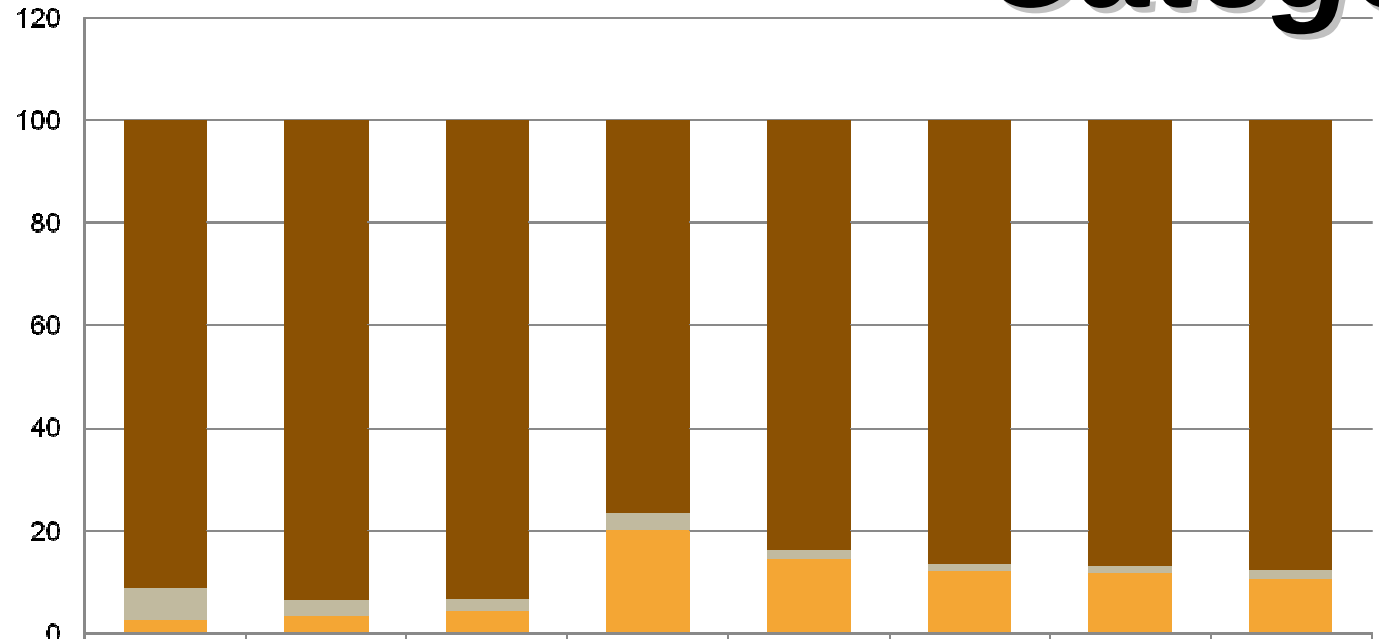
On-going

- Developing necessary roadmaps for each regulation implementation towards full implementation
- Identifying key-tasks and respective key-players
- Establishing Malaysian/regional Technical Services
- Establishing regional collaboration for TS and resource sharing
- Looking into any further need to adopt other regulations

THANK YOU

Annexure

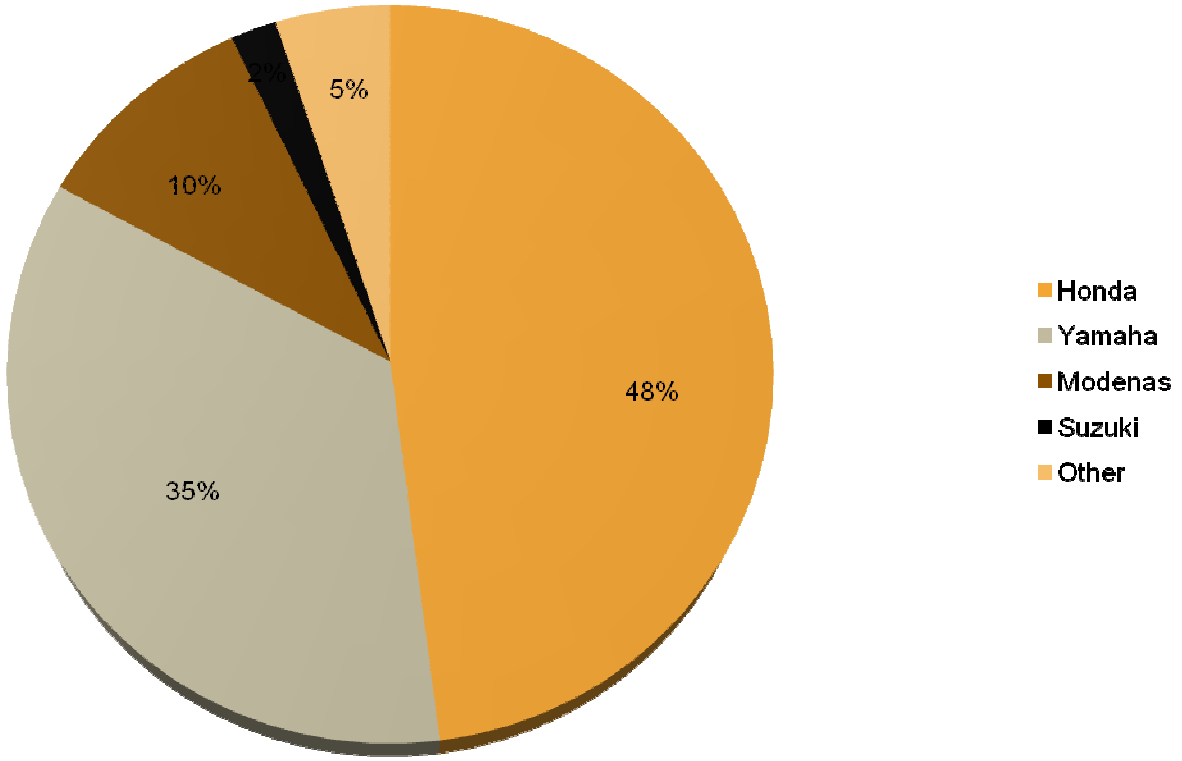
Market Segmentation by Category



	2000	2001	2002	2003	2004	2005	2006	2007
Moped	91.3	93.7	93.6	76.7	84	86.9	87	87.8
Street	6.2	3	2.2	3.3	1.7	1.3	1.4	1.8
Scooter	2.5	3.3	4.2	20	14.3	11.9	11.6	10.4

Source: Motorcycle & Scooter Assemblers And Distributor Association of Malaysia and Road Transport Department Malaysia

Market Share By Brand



Source: Motorcycle & Scooter Assemblers And Distributor Association of Malaysia and Road Transport Department Malaysia

4. Bus Compliance to UNECE R66 and UNECE R80

❖ Numerous in-depth analytical studies and reconstruction of real world bus crashes by MIROS reveal that many of our buses have frail superstructure design and poor seat design and anchorage.

❖ Cabinet of Malaysia has made a policy decision to incorporate United Nations Economic Commission for Europe (UNECE) guidelines – UNECE R66 and UNECE R80 as part of the type approval for new buses effective November 2007.

❖ Implementation: Jabatan Pengangkutan Jalan (JPJ)

Note:
R66 – Uniform Technical Prescriptions Concerning The Approval of Large Passenger Vehicles with regard to The Strength of Their Superstructure.
R80 – Uniform Provisions Concerning The Approval of Seats of Large Passenger Vehicles with regard to The Strength of The Seats and Their Anchorages.

3. Implementation of Rear Seatbelt Use in Vehicles

❖ MIROS Study: 95% of Malaysian cars are fitted with rear seatbelts and 81% of Malaysian road users have access to rear seatbelts.

❖ It is a proven fact that rear seatbelts are 44% effective in reducing fatalities compared to unrestrained back seat occupants.

❖ A 60% compliance to rear seatbelt use is estimated to reduce 63 fatalities a year, and a further reduction in terms of injury severity is expected.

❖ The policy has been enforced on 1st January 2009.

Publication (downloadable through MIROS website):
1.MRR/4/2007: An Assessment of Rear Seatbelt Availability and Accessibility in Malaysia - a Preliminary Study
2.MRR/9/2008: PHASE 1 : Achievements of First 3-Month Advocacy Program - Rear Seatbelt Use : Public Awareness and Practice

General Road Accident Statistics and Fatality Index in Malaysia

Year	Population	Vehicles Registered	Number of Accidents	Number of Accident (Predicted)	Death	Death (Predicted)
1994	19,494,000	7,210,089	148,801	152259	5,159	5436
1995	20,096,700	6,802,375	162,491	168378	5,712	5661
1996	21,169,000	7,686,684	189,109	184497	6,304	5792
1997	21,665,600	8,550,469	215,632	200616	6,302	5885
1998	22,679,600	9,141,357	211,037	216735	5,740	5958
1999	22,711,900	9,929,951	223,166	232854	5,794	6017
2000	23,200,000	10,589,804	250,417	248973	6,035	6067
2001	23,263,600	11,302,545	265,175	265092	5,849	6110
2002	23,263,600	12,068,144	279,237	281211	5,887	6149
2003	25,048,300	12,868,934	298,651	297330	6,282	6183
2004	25,600,000	13,801,297	326,815	313449	6,228	6214
2005	26,130,000	14,816,407	328,268	329568	6,200	6242
2006	26,640,000	15,790,732	341,252	345687	6,287	6268
2007	27,170,000	16,825,150	363,314	361806	6,282	6292
2008	27,730,000	17,626,411	373,071	377925	6,527	6314

Year	Every 10,000 vehicles	Every 100,000 population	Every Billion VKT
1997	7.37	29.1	33.57
1998	6.28	25.3	28.75
1999	5.83	25.5	26.79
2000	5.70	26.0	26.25
2001	5.17	25.1	23.93
2002	4.88	25.3	22.71
2003	4.88	25.1	22.71
2004	4.51	24.3	21.10
2005	4.18	23.7	19.58
2006	3.98	23.6	18.69
2007	3.73	22.8	17.6
2008	3.63	23.5	17.3
TARGET (2010)	2.0	10.0	10.0

Goal

- Reduce the number of death per 10,000 registered vehicle by 52.4% from 4.2 in 2005 to 2.0 in 2010
- 10 death per 100,000 population compared to current situation
- 23 death per 100,000 population
- 10 death per 1.0 billion VKT compared to 18 death per 1.0 billion VKT

TYPE APPROVAL COMITTEE

VEHICLE TYPE APPROVAL & HOMOLOGATION

GOVERNMENT AGENCIES RELATED TO AUTOMOTIVE

CHAIR BY DIRECTOR GENERAL OF ROAD TRANSPORT DEPARTMENT (JPJ)

IMPLEMENTATION OF UNECE REGULATION

- Planned
- Unscheduled (Fast Track)

Planned

- Select Regulations easy to implement and available testing facilities
  - Scheduled implementation

Unscheduled (Fast Track)

- Regulations decided by Government/Cabinet
  - Immediate due to safety issues

Proposed Implementation of UNECE Regulations for 1 January 2011.

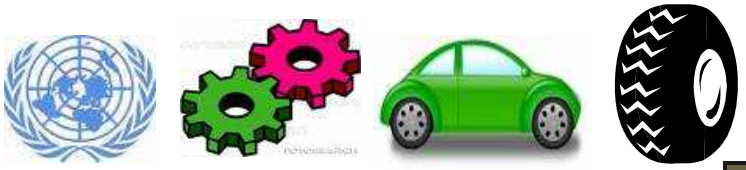
No.	Reg.No	Description	M_1	M_2	M_3	N_1	N_2	N_3	O_1	O_2	O_3
1	R83	Exhaust Emission	X	X	X	X	X	X	X	X	X
2	R51	Noise Emission	X	X	X	X	X	X	X	X	X
3	R13/13H	Brake Performance	X	X	X	X	X	X	X	X	X
4	R16	Safety Belts	X			X					
5	R14	Safety Belts Anchorage	X	X	X	X	X	X			
6	R43	Safety Glass	X	X	X	X	X	X			
7	R7	Brake Lamp Performance	X	X	X	X	X	X	X	X	X
8	R6	Indicator Performance	X	X	X	X	X	X	X	X	X
9	R112	Headlamp Beam	X	X	X	X	X	X			
10	R48,R98, R99	High Intensity Lamp	X	X	X	X	X	X			
11	R17	Seats	X			X	X	X			
12	R30	Tyres	X						X	X	
13	R28	Audible Warning Devices	X	X	X	X					
14	R69	Rear Marking Plates For Slow Moving Vehicles And Their Trailers					X	X	X	X	X
15	R70	Rear Marking Plates For Heavy And Long Vehicles					X	X	X	X	X
16	R104	Retro-Reflective Markings For Heavy And Long Vehicles					X	X	X	X	X
17	R58	Rear Underrun Protection					X	X	X	X	X
18	R73	Lateral Protection					X	X	X	X	X
19	R93	Front Underrun Protection					X	X	X	X	X
20	R54	Pneumatic Tyres (Commercial Vehicles)		X	X	X	X	X			X
21	R108/R109	Retreaded Tyres	X	X	X	X	X	X	X	X	X
22	R80	Seat (Large Passenger Vehicle)		X	X						
23	R36	Construction Of Public Service Vehicle		X	X						
24	R52	Construction Of Small Capacity Public Service Vehicles		X	X						
25	R66	Strength Of Superstructure (Large Passenger Vehicle)		X	X						

Proposal Implementation of UNECE Regulations as at 1 January 2011.

No.	Reg.No	Description	L_1	L_2	L_3	L_4	L_5
1	R40/DOE	Exhaust Emission			X	X	X
2	R41/DOE	Noise Emission			X		
3	R78	Brake Performance	X	X	X	X	X
4	R50	Brake Lamp Performance	X	X	X	X	X
5	R6	Indicator Performance	X	X	X	X	X
6	R57	Headlamp	X	X	X	X	X
7	R98,R99	High Intensity Lamp	X	X	X	X	X
8	R75	Tyres	X	X	X	X	
9	R28	Audible Warning Device			X	X	X
10	R3	Red Reflector	X	X	X	X	X

*DOE-Department of Environment

TYPE APPROVAL PROCEDURES



Application for type approval (Vehicle /components/ new regulation)

1) Verify document
2) Vehicle testing (physical & drive)

Type Approval committee meeting

1) Technical summary presentation by JPJ
2) Identify if any problem occurred
3) Opinion & advise from committee

Issue Type Approval Certificate

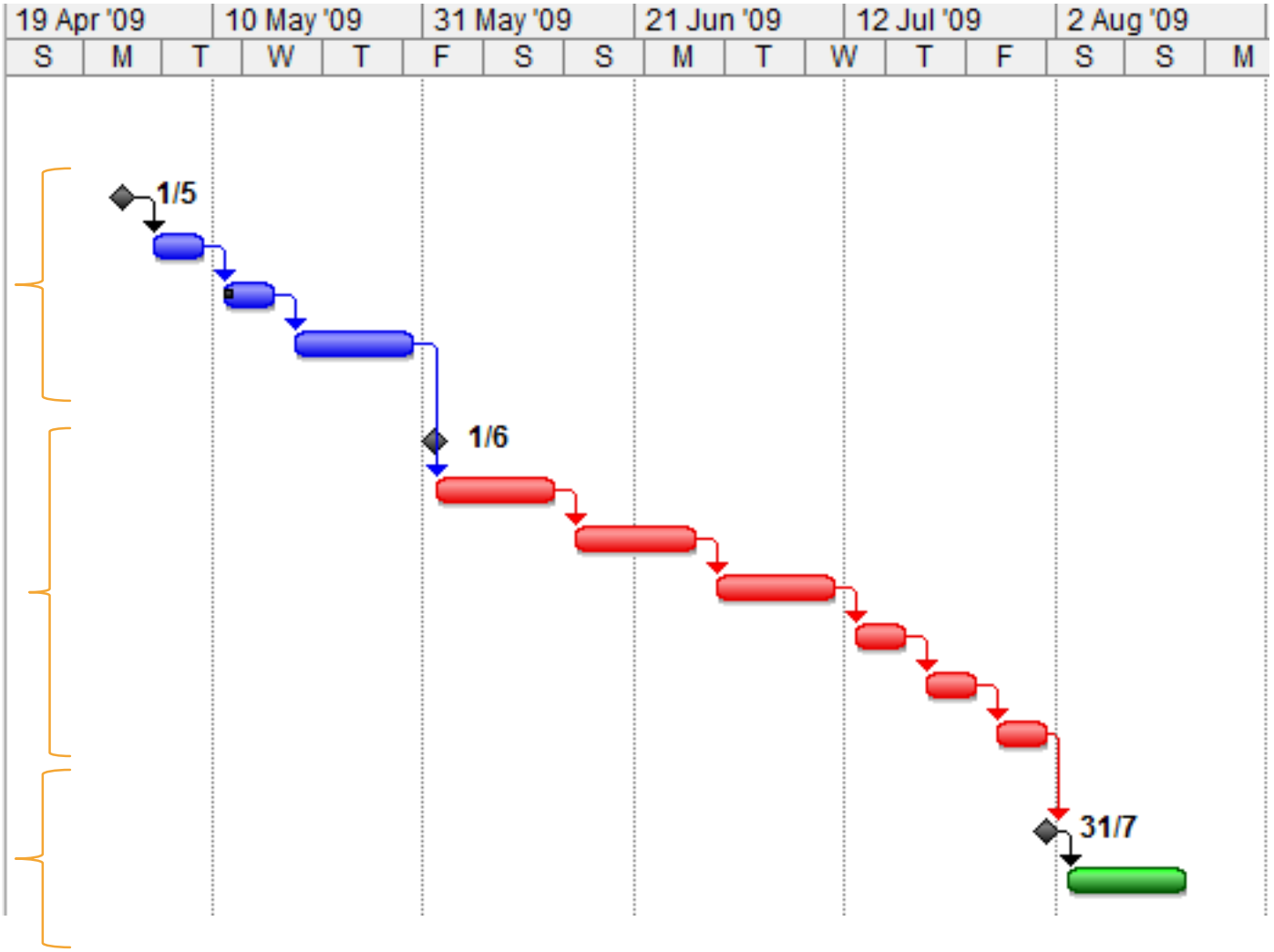
1) Record and Filing
2) Request to IT department to create Vehicle Code (Make Code, Model Code & Body Code)
3) Send the new code to PUSPAKOM for inspection

IMPLEMENTATION GANTT CHART

MEETING WITH INDUSTRY'S STAKEHOLDERS

MEETING WITH AG

C&U REPORTING



IMPLEMENTATION SCHEDULE

C&U FINAL DRAFT PRESENTATION	0 days	Fri 1/5/09	Fri 1/5/09
C&U seminar with industry's stakeholders	5 days	Mon 4/5/09	Fri 8/5/09
C&U discussions and comments	5 days	Mon 11/5/09	Fri 15/5/09
C&U implementation final conclusion	10 days	Mon 18/5/09	Fri 29/5/09
AMENDMENT PROCESS WITH AG	0 days	Mon 1/6/09	Mon 1/6/09
discussion with PUU JPJ & MOT	10 days	Mon 1/6/09	Fri 12/6/09
discussion with PUU & AG	10 days	Mon 15/6/09	Fri 26/6/09
comments from AG & amendment	10 days	Mon 29/6/09	Fri 10/7/09
presentation to AG	5 days	Mon 13/7/09	Fri 17/7/09
comments and final amendment from AG	5 days	Mon 20/7/09	Fri 24/7/09
presentation and minister's approval	5 days	Mon 27/7/09	Fri 31/7/09
2009 C&U REPORTING	0 days	Fri 31/7/09	Fri 31/7/09
AG's reporting process	10 days	Mon 3/8/09	Fri 14/8/09