

MOTORCYCLIST SAFETY REGULATION

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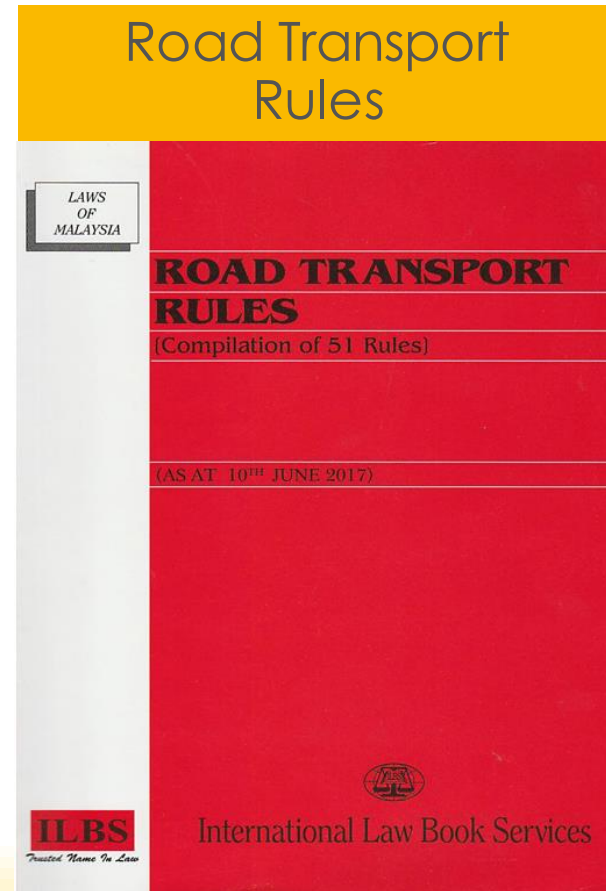
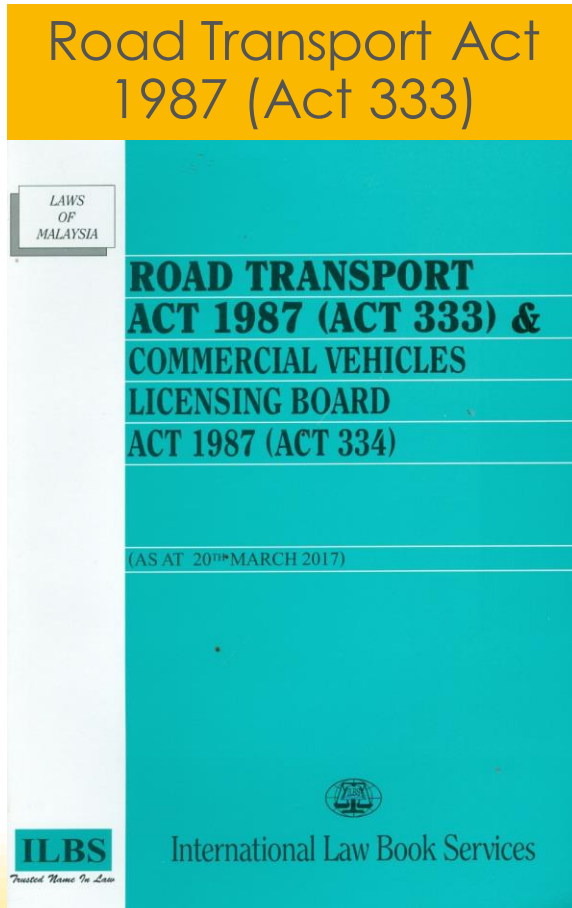
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CERT. NO.: MY-AR 6006



towards safer vehicles



MAIN SOURCE FOR MOTORCYCLE SAFETY REGULATIONS



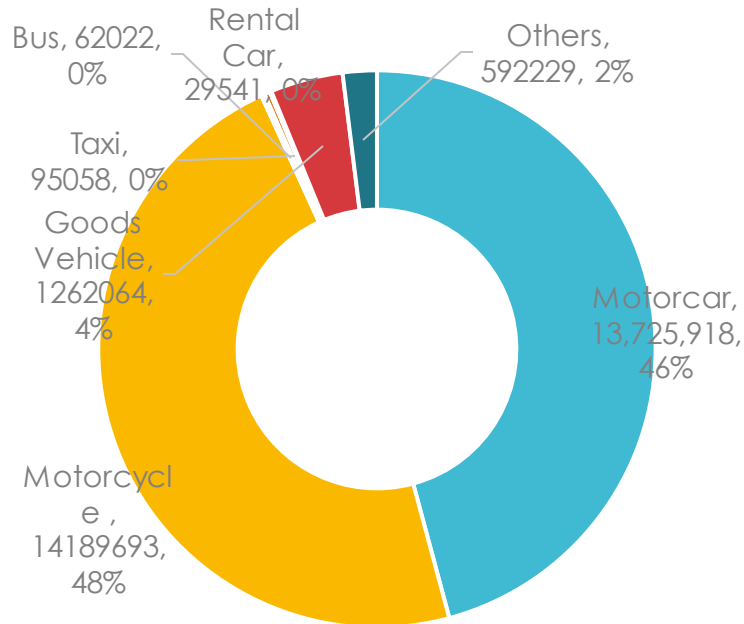
MOTOR CYCLE - CLASSIFICATION

- Classification of motor vehicles for motor cycle according to Section 5 (1)(b), Road Transport Act 1987 is motor vehicles with less than four wheels, and the unladen weight of which does not exceed 450kg



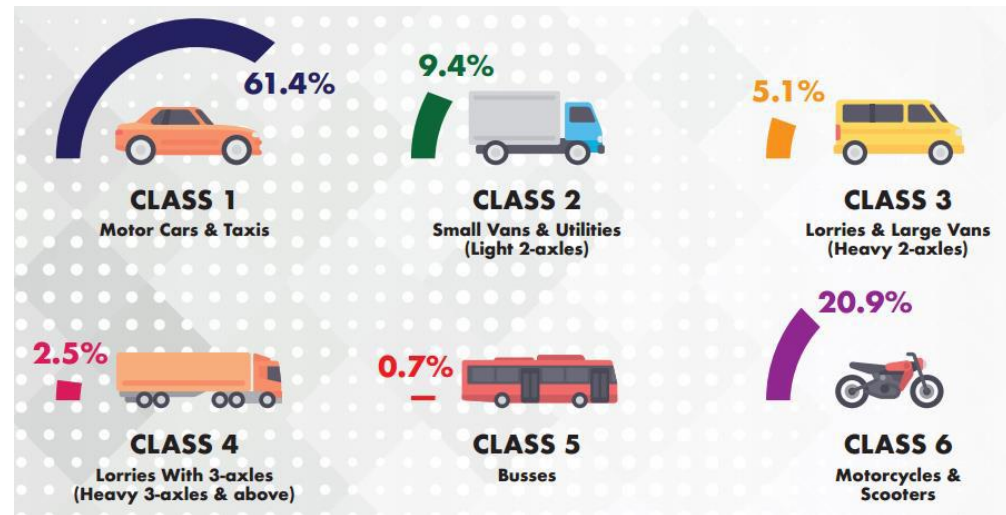
VEHICLE COMPOSITION

Registered Vehicles



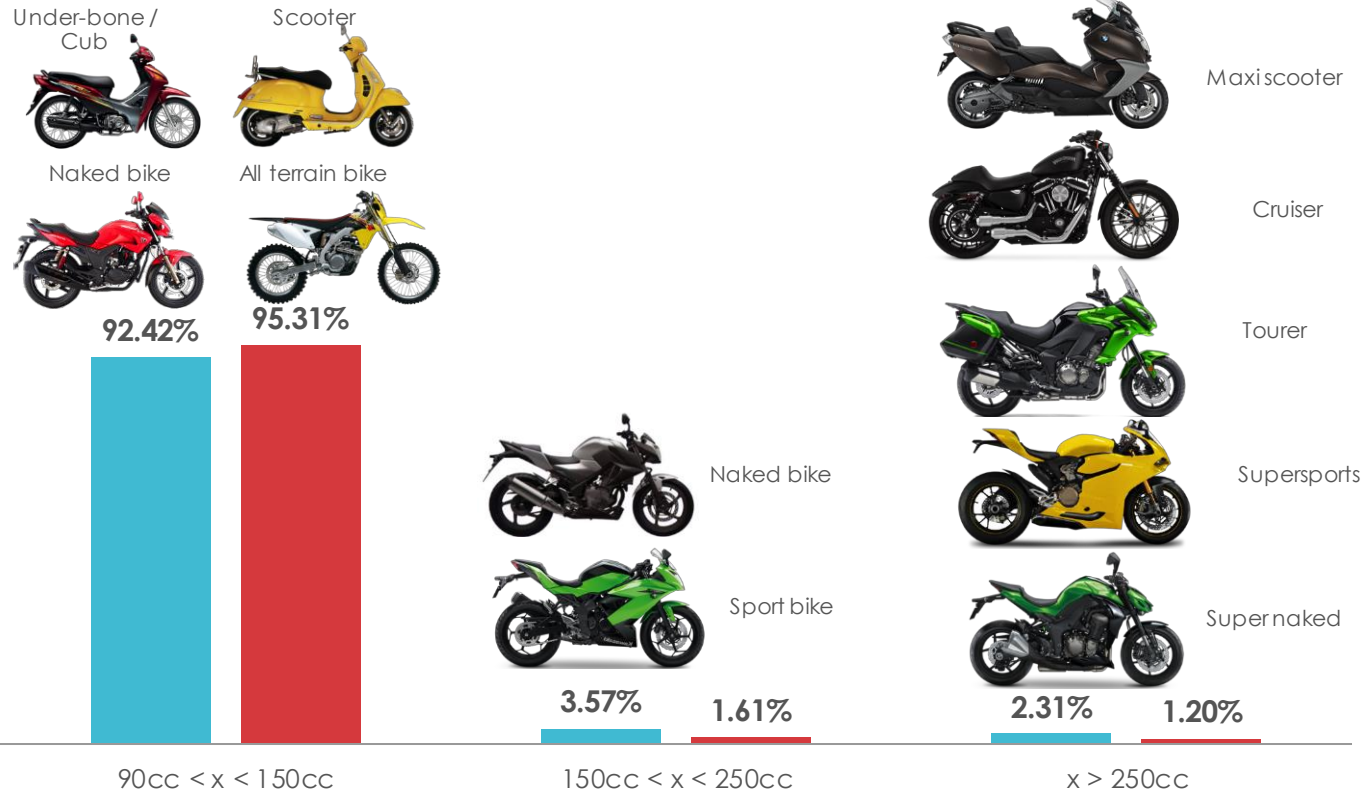
Source: Road Transport Department

Road Traffic Volume



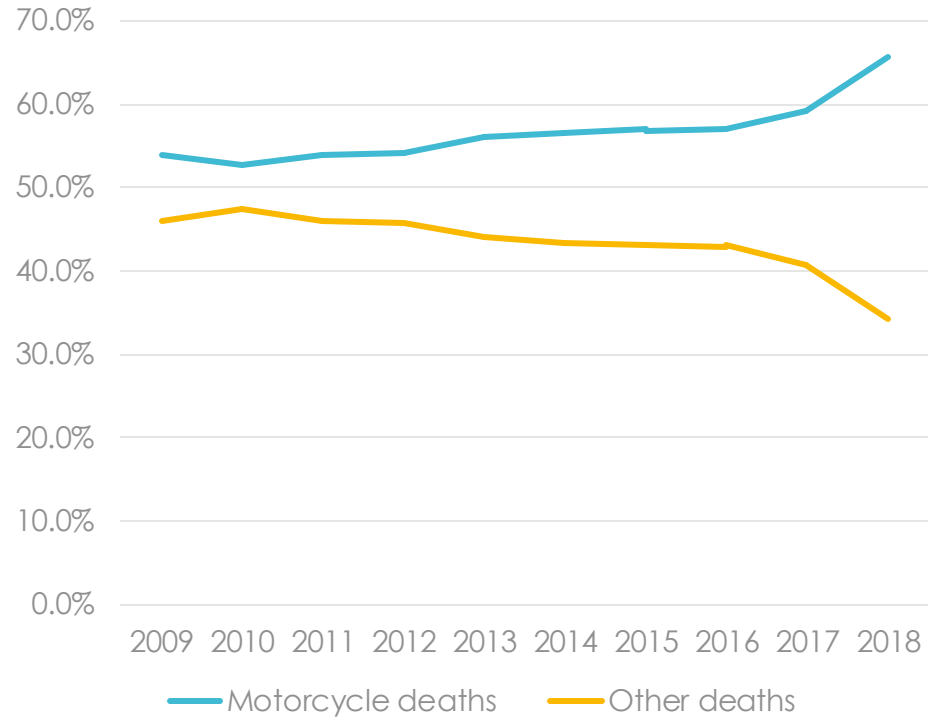
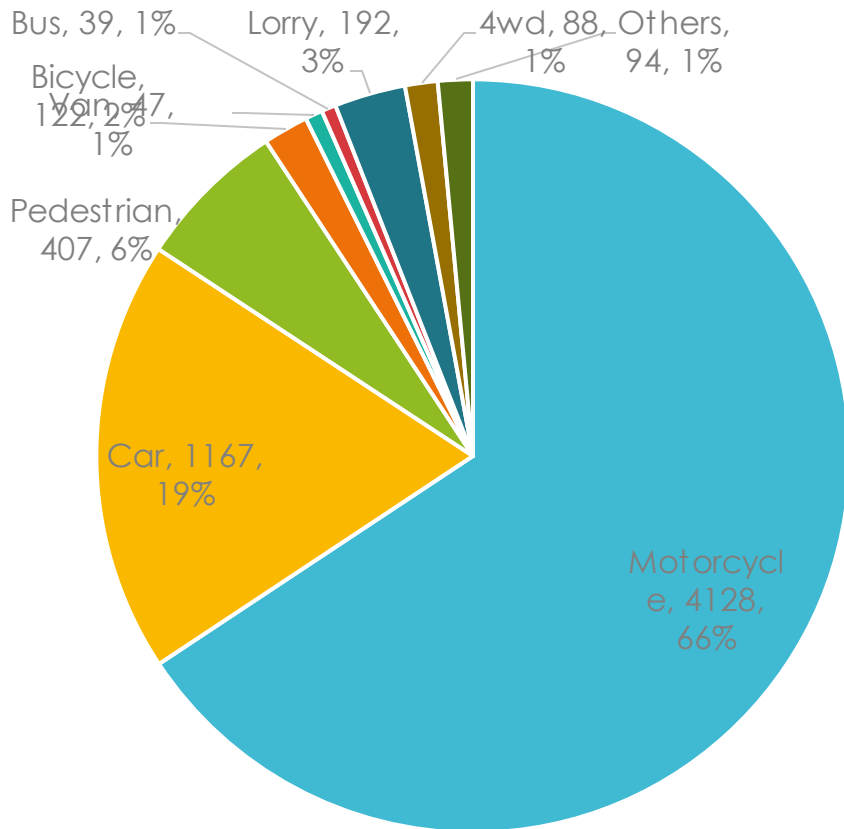
Source: Ministry of Works

MOTORCYCLE COMPOSITION IN MALAYSIA



Source
1. Abdul Manan, M. M., Ho, J.S., Syed Tajul Malik, S.T.A., M. Ruhaizat, G. (2016), **Speed study and Behavior observation of motorcyclist along Malaysian roads**, MIROS Research Report MRRxx/2016, MIROS, Kuala Lumpur (In press)
2. JPJ (2015)

STATISTICS



Source: Royal Malaysian Police

- In 2018, motorcycle deaths was 66% from the overall road traffic deaths
- For the past 10 years motorcycle always more than others user group death

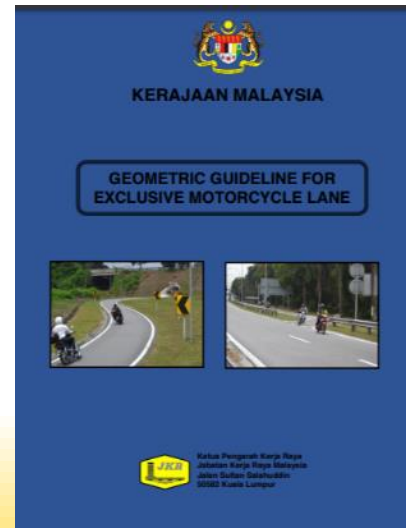
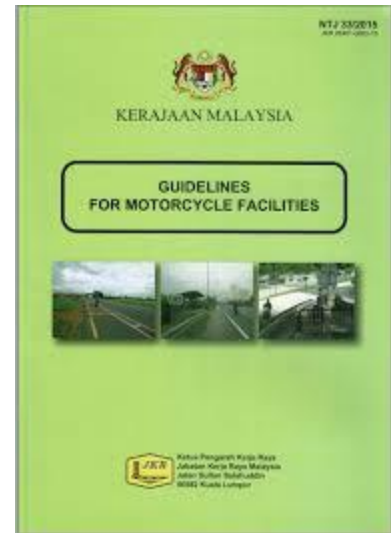
PILLAR 2 – SAFER ROADS

Guidelines related to motorcycle facilities published by Public Works Department:

- NTJ 33/2015 Guidelines for Motorcycle Facilities
- ATJ 35/2018 Geometric Guideline for Exclusive Motorcycle Lane

The objectives for both guidelines are:

- The objective is to provide engineering practitioners with better understanding of motorcyclists' safety needs and incorporate the needs in the upgrading and maintenance of existing roads and the planning, design and construction of new roads
- To assist road designers on the design criteria and approach to provide uniform and standard design for Exclusive Motorcycle Lane (EML)



MOTORCYCLE FACILITIES



Non-exclusive motorcycle lane



Exclusive motorcycle lane

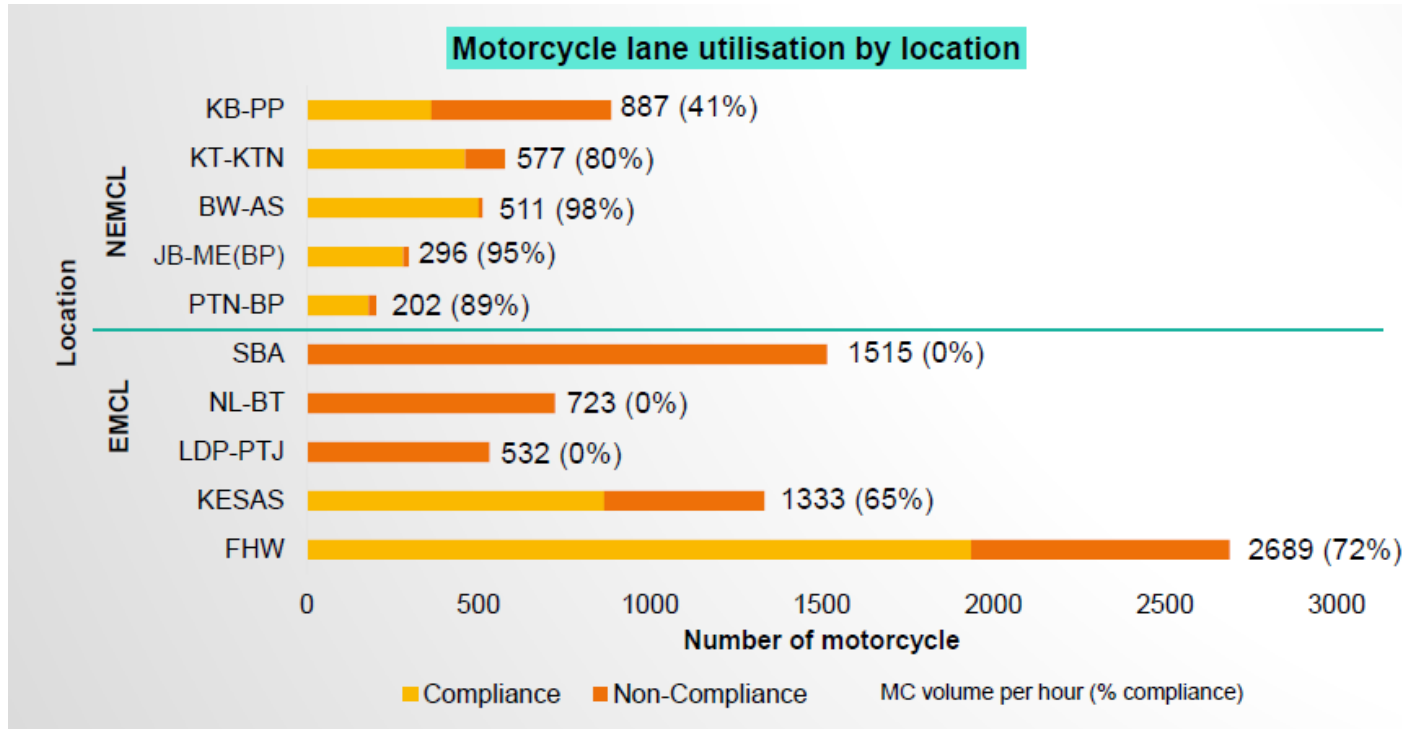


Motorcycle shelter



Motorcycle storage zone

MOTORCYCLE FACILITIES



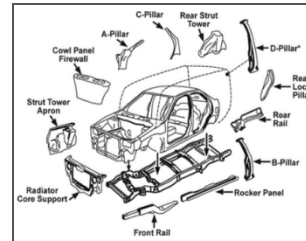
- Utilisation of motorcycle lane are generally higher on no exclusive motorcycle lane
- There evidence of miss-use of motorcycle lane by other vehicles

PILLAR 3 – SAFER VEHICLES

Vehicle Type Approval (VTA) System in Malaysia

Type Approval is granted to a product that meets a **minimum** set of regulatory, technical and safety requirements.

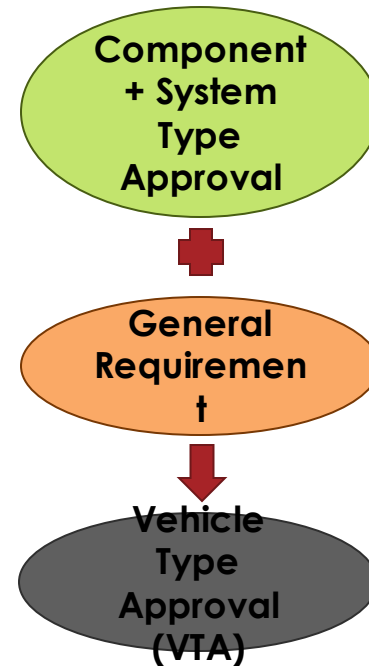
Component Type Approval is product compliance (including **System Approval**) with specified standards or regulations (Malaysian Standards/UN Regulations).



General Requirements are the requirements listed under Road Transport Act 1987, Environmental Quality Act 1974 and Road Transport Rules.



Vehicle Type Approval (VTA) is a homologation process to confirm the production sample of a vehicle design to comply with specified standards or UN Regulations before a vehicle registration is allowed in Malaysia.



Gazetted UN Regulations

MOTORCYCLE



TYPE APPROVAL OF MOTORCYCLE

Implementation of UN Regulations based on Vehicle Category

* Generally the mentioned UN Regulations are applicable

Environment

Noise (3-Wheeled Vehicle)	R9	1
Diesel Smoke	R24	2
Exhaust Emission	R40	3
Noise	R41	4
Exhaust Emission	R47	5
Noise (Moped)	R63	6

General Safety

EMC Compatibility	R10	7
Speedometer	R39	8
Safety Glass	R43	9
Protect Unauthorized Use	R62	10

Passive Safety

Safety-belts	R16	11
Head Restraints	R25	12



Total of 40 UN Regulations

Braking	R78	32
Rear-view Mirrors	R81	33
Halogen Headlamps (HS2)	R82	34
Day Time Running Lamps	R87	35
Replacement Brake Lining	R90	36
Gas-Discharge Headlamps	R98	37
Headlamps Asymmetrical	R112	38
Headlamps Symmetrical	R113	39
LED Light Sources	R128	40

L 1-7 Kategori

Active Safety

Retro Reflecting Device	R3	13
Direction Indicators	R6	14
Stop & End-outline Lamps	R7	15
Front Fog Lamps	R19	16
Audible Warning Devices	R28	17
Filament Lamps	R37	18
Rear Fog Lamps	R38	19
Headlamp Cleaners	R45	20
Rear-view Mirror	R46	21
Lights	R50	22
Installation of Lights	R53	23
Headlamps (Moped)	R56	24
Headlamps (M'cycle)	R57	25
Driver Operated Control	R60	26
Special Warning Lights	R65	27
Halogen Headlamps	R72	28
Installation of Lights	R74	29
Tyres	R75	30
Headlamps (Moped)	R76	31

There are 40 UN Regulations related to motor cycle gazetted in Malaysia

VEHICLE TYPE APPROVAL (VTA) LABELING

- Enforcement of Product Labeling for VTA have been done since **1st January 2014**.
- Starting **1st July 2014**, product labeling become mandatory item on PUSPAKOM inspection
- Product labeling should include this information:
 - i. Name of the Manufacturer ;
 - ii. Vehicle Type Approval (VTA) Number ;
 - iii. Vehicle Identification Number (VIN) / Chassis Number ;
 - iv. Gross Vehicle Weight (GVW) of the vehicle* ;
 - v. Gross Combination Weight (GCW), where the vehicle is used for towing** ; and
 - vi. Axle load rating for each axle, listed in order from front to rear.

NAMA PENGELUAR KENDERAAN
XXX/0001/17
NO CASIS KENDERAAN
2395 kg
4555 kg
1 – 1225 kg
2 – 1295 kg

COMPONENT TYPE APPROVAL COMPLIANCE LABELING/MARKING

- All component/system certified under **UN Regulation (E-mark)** or **Malaysian Standards (MS mark)** must comply with product labeling/marketing outlined inside each regulation or standard.

Example:



E-mark at Motorcycle Helmet



E-mark at Tyre



MS-mark at Tyre



MS-mark at Helmet

- **Ministry of Domestic Trade, Co-operatives & Consumerism (KPDNKK)** have enforced **Trade Description (Marking on Pneumatic Tyre and Motorcycle Helmet) 2012** which require all tyres and motorcycle helmets sold in Malaysia must **obtain certification** according to Malaysian Standards (MS) and/or UN Regulations (E-mark) and/or FMVSS (DOT) and **have related marking**.

PILLAR 4 – SAFER ROAD USER

Motorcycle licence	
<p>Age Requirement Section 39, Road Transport Act 1987</p>	<p>(1) No person under sixteen years of age shall drive a motor vehicle on a road.</p> <p>(2) No person under seventeen years of age shall drive a motor vehicle other than a motor cycle or an invalid carriage on a road</p>
<p>Driving Licences Requirement Section 26, Road Transport Act 1987</p>	<p>no person shall drive a motor vehicle of any class or description, on a road unless he is the holder of a driving license authorizing him to drive a motor vehicle of that class or description, and no person shall employ or permit another person to drive a motor vehicle on the road unless the person so employed or permitted to drive is the holder of such a driving license</p>

TYPES OF MOTORCYCLE DRIVING LICENSE



Learner's Driving License (L)

- Successfully completed:
- Theory class (6 hours)
 - Theory test



Probationary Driving License (P)

- Successfully completed:
- In circuit practical riding
 - On road practical riding
 - Pre-test practical
 - Practical test with RTD



Competent Driving License

- Successfully completed
Probationary Driving License for 2 years

MOTORCYCLE LICENSE CLASSES



A: Unladen weight no exceeding 450kg



B2: Not exceeding 250cc



B1: Not exceeding 500cc



B : Exceeding 500cc



C : Three wheels

PILLAR 4 – SAFER ROAD USERS



- **Paragraph 88(1)(s) Road Transport Act 1987** require persons driving or being carried on motorcycles to wear protective helmets
- **Motorcycles (Safety Helmets) Rules 1973 [P.U. (A) 43/1973]** require every safety helmet shall conform with the specification of **MS 1** Specification Protective Helmets for Vehicle Users or **UN Regulation No. 22** Uniform Provisions Concerning the Approval of Protective Helmets and their Visors for Drivers and Passengers of Motorcycles and Mopeds

MOTORCYCLE PERSONAL PROTECTIVE EQUIPMENT

- The only protective equipment required in Malaysia for riding a motorcycle is a safety helmet
- Other protective equipment such as gloves, jacket, boots are not compulsory

FULL GEAR vs FOOL'S GEAR

HELMET

Most important piece of protective gear a rider can use. Protects against head injury, windblast, cold and flying objects. Full faced helmet recommended.

FACE SHIELD

Saves face! Any rider who's been hit in the face by stones, insects or debris can tell you the benefits.

GLOVES

Keep hands comfortable, functional and protected. Come in infinite variety for all seasons.

JACKET & PANTS

Long sleeves and trousers resist abrasion and protect against sunburn, windburn, dehydration or hypothermia. Light colors or reflectives increase a rider's visibility.

BOOTS

Provide protection against foot and ankle injuries and give you a good grip on footpegs or road surfaces.

BOTTOM LINE

Proper riding gear protects in the event of an accident and minimized injuries, when allowing you to enjoy the sport in comfort.

HEAD

Considered precious by knowledgeable riders and never exposed by the pros. When fully in view, allows immediate identification of untrained person not using his. Hand out rider education info on site!

EYES, EARS & FACE

Known to experienced riders as "bug and garbage collectors." Common "bare-face" symptoms include windblast-deafening and deformed, narrow-sit, watery eyes.

HANDS

au naturale (not for long). Known to seize into curled position when exposed to cold; not genetically evolved to withstand abrasion.

BARE LIMBS

A phenomenon seen only on riders deemed impervious to any unavoidable accident or inclement weather. Subject to ridicule in riding circles.

FLIP FLOPS

Terminology for what sandals, toes and feet do upon contact with road surfaces, shift lever, brake pedal, footpegs, or windblasts.

BOTTOM LINE

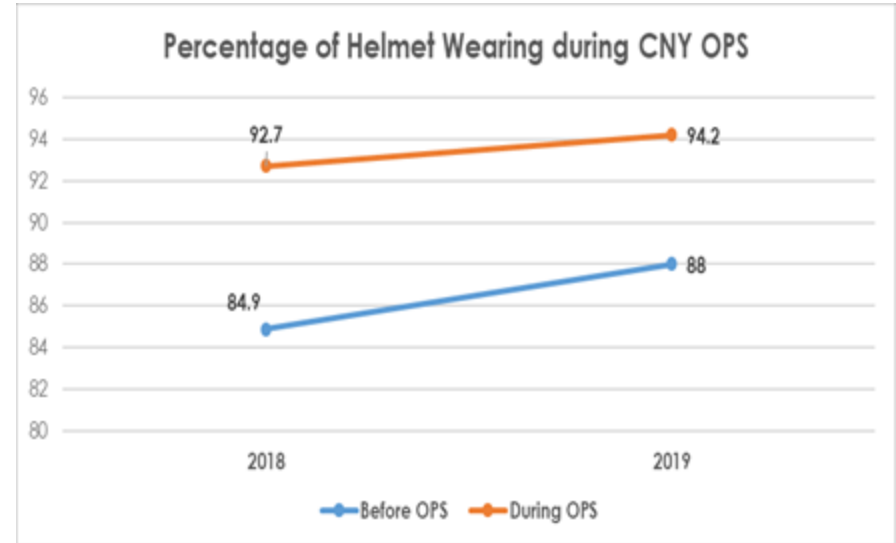
Fool's gear identifies an untrained rider. Learn how to avoid embarrassment, ridicule and injury, while gaining skills and knowledge by contacting the Rider Course nearest you.



THE MORE YOU KNOW, THE BETTER IT GETS.

SAFETY HELMET WEARING RATE

- Generally safety helmet wearing rate is high especially in urban area
- Overall rate of helmet wearing increased slightly from 92.7% during before OPS to 94.3% during OPS (↑ 1.6%,).
- Overall percentage adult wearing helmet rate was high.
- Proper helmet wearing (89.8%) (increase by 7.2% during OPS as compared to before OPS).



RISK REDUCTION AMONG MOTORCYCLIST

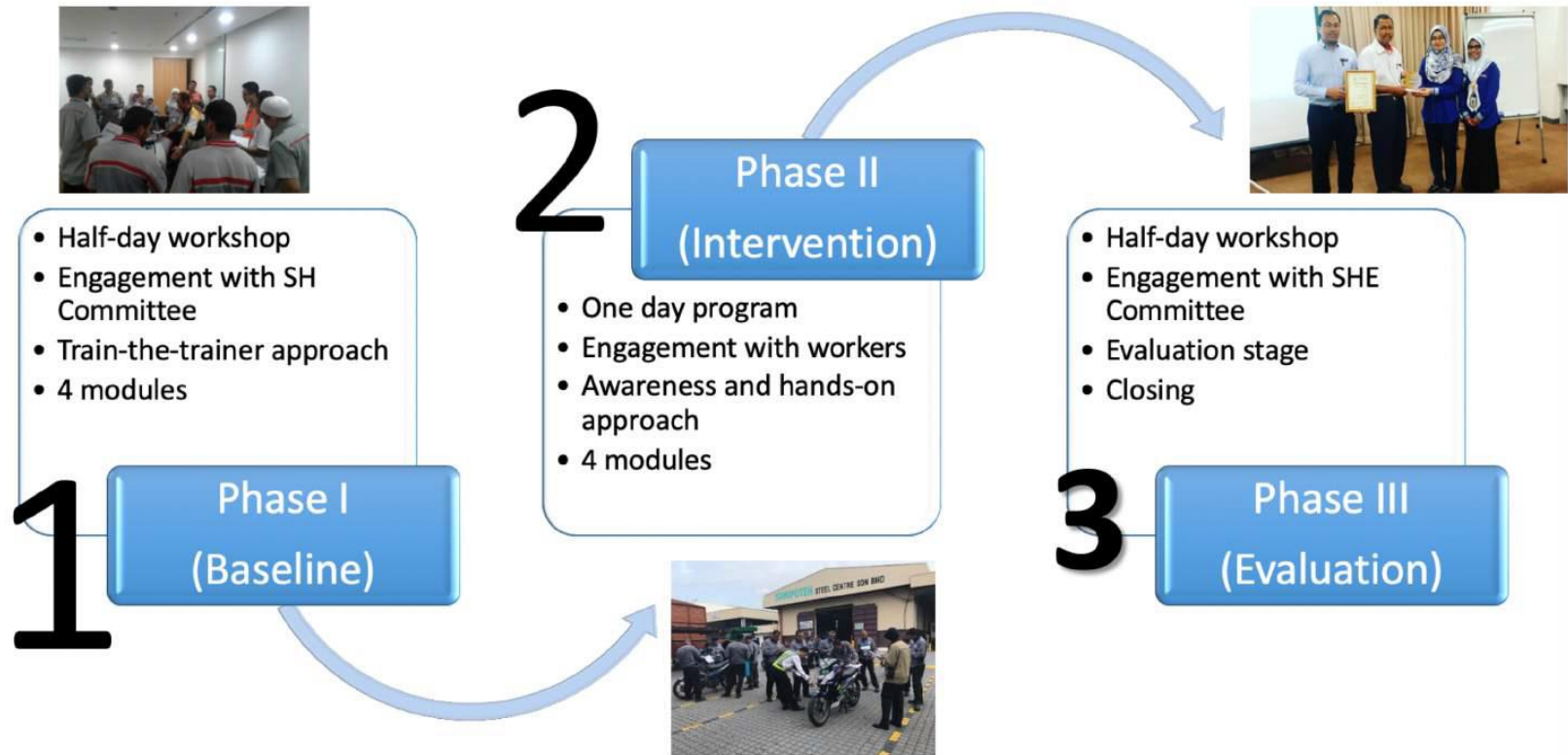
No	Indicator	2014	2015	2016
1	Motorcyclist deaths due to not wearing helmet	1,141	1,403	1,500
2	Percentage of summons due to not wearing per total of summons	1.39% (107,488)	1.39% (89,616)	1.33% (94,167)

Source: MRR No 256 Pelan Keselamatan Jalan Raya 2014 – 2020: Laporan Status Pencapaian dan Cadangan Penambahbaikan

For the three years period (2014-2016) **31.4%** of overall motorcycle deaths is due to not wearing helmet

OTHER REGULATIONS/INTERVENTION

Community Support Safety Programme



- After the implementation of CSSP, 81.3% out of total companies completed the survey with significant reduction of riding behaviour (improved riding behaviour)
- About 85% of participants had improved their riding behaviour specifically on compliance of personal protective equipment while riding.

OTHER REGULATIONS/INTERVENTION

Day-Running-Light (DRL)

- introduced in early 1990s in an effort to increase motorcycle conspicuity and subsequently reduce motorcycle crash risks when traveling on roads and mix with other transport mode.
- Radin Umar (2005), concluded that running headlights campaign and regulation have been successful in improving motorcycle safety in Malaysia.
- The study revealed that that the odds ratio before the intervention is much higher ($p < 0.06$) than the odds ratio after the intervention.
- The daytime conspicuity related accidents dropped significantly by about 29 per cent following the intervention while no significant ($p > 0.05$) change was noticed for the non-conspicuity related cases.



OTHER REGULATIONS/INTERVENTION

High Visibility Windbreaker (HVWB)

- The visibility of motorcyclists who wore HVWB during daytime is higher by 16.9% than those without HVWB, whereas the visibility of motorcyclists who wore HVWB during night time is higher by 13% than those without HVWB
- HVWB could be considered as an important 'tool' while on the road in order to increase the conspicuity level of motorcyclists among road users and could indirectly reduce the occurrence of road accidents involving motorcyclists in the nation



SUMMARY

- Motorcyclist safety regulation in Malaysia cover all three main aspects, road, vehicle and motorcyclist as user
- New regulation such as Antilock-Braking System (ABS) or Combined-Braking System (CBS) can be made regulatory however need to be coupled with effective campaign and advocacy program



THANK YOU

MIROS

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