European Commission

Government Offices of Sweden
Ministry of Enterprise and Innovation

TRAFIKVERKET
SWEDISH TRANSPORT ADMINISTRATION

SWEDISH TRANSPORT AGENCY

Philosophy Underlining Tomorrow's Safer Roads

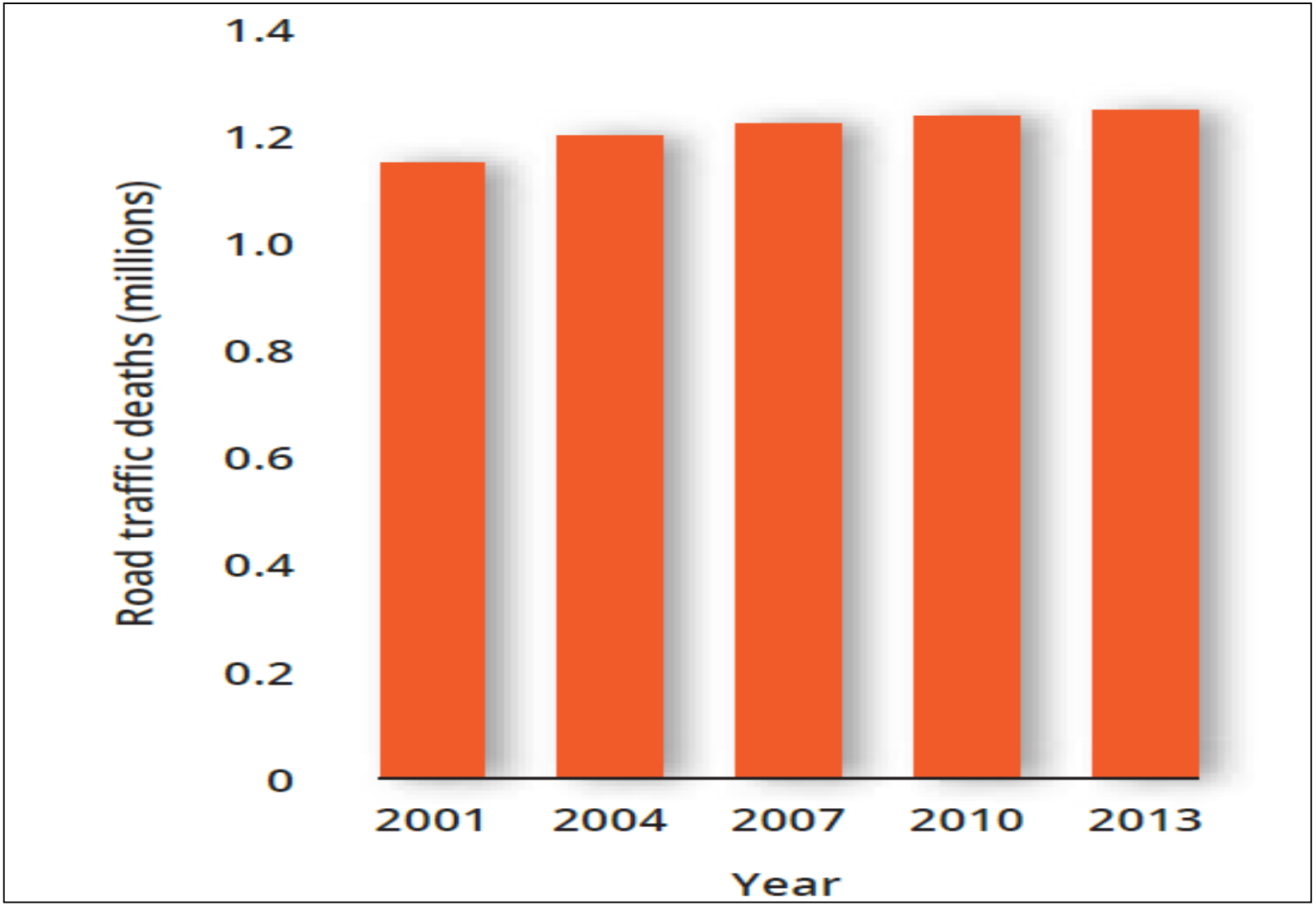
South East Asia

Presented by
Dr. Rohit Baluja
President IRTE
June 14, 2017

IRTE Institute of Road Traffic Education

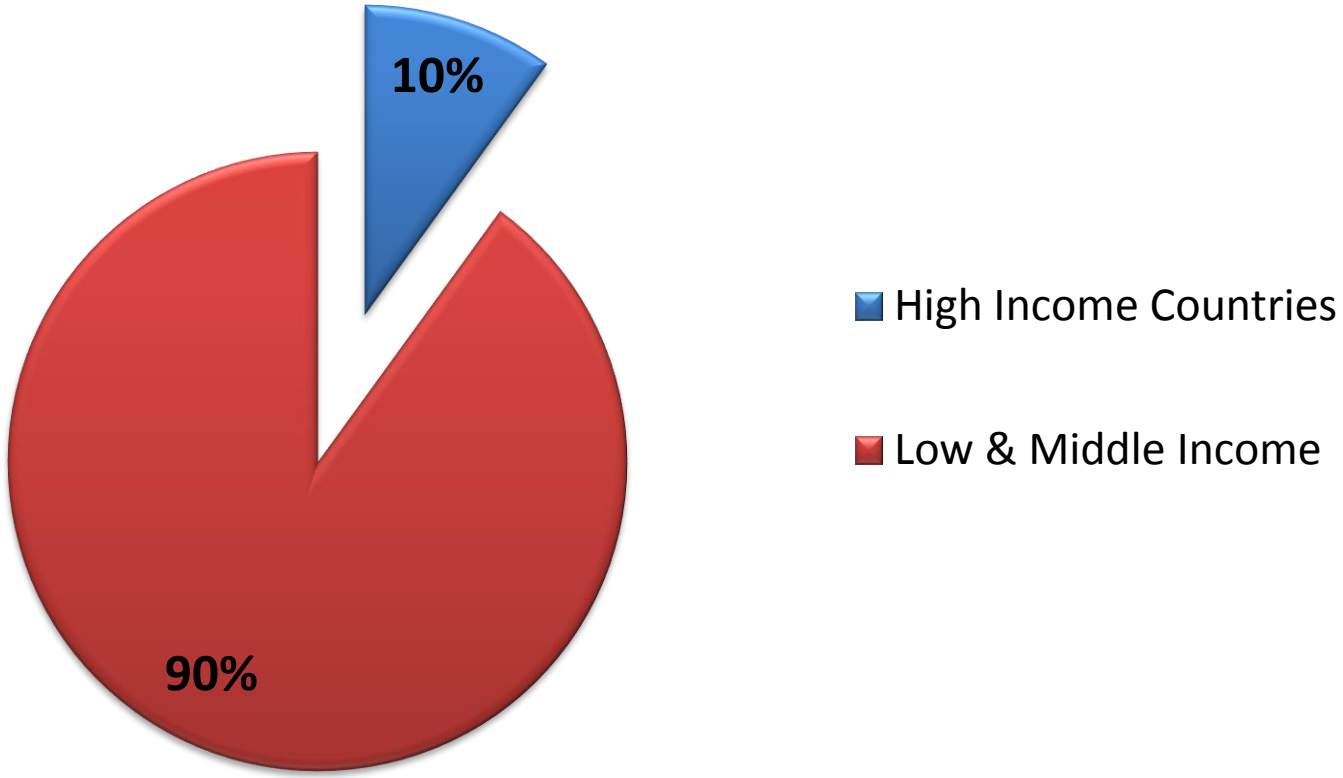
TOWARDS ZERO FOUNDATION

Global Road Traffic Fatalities

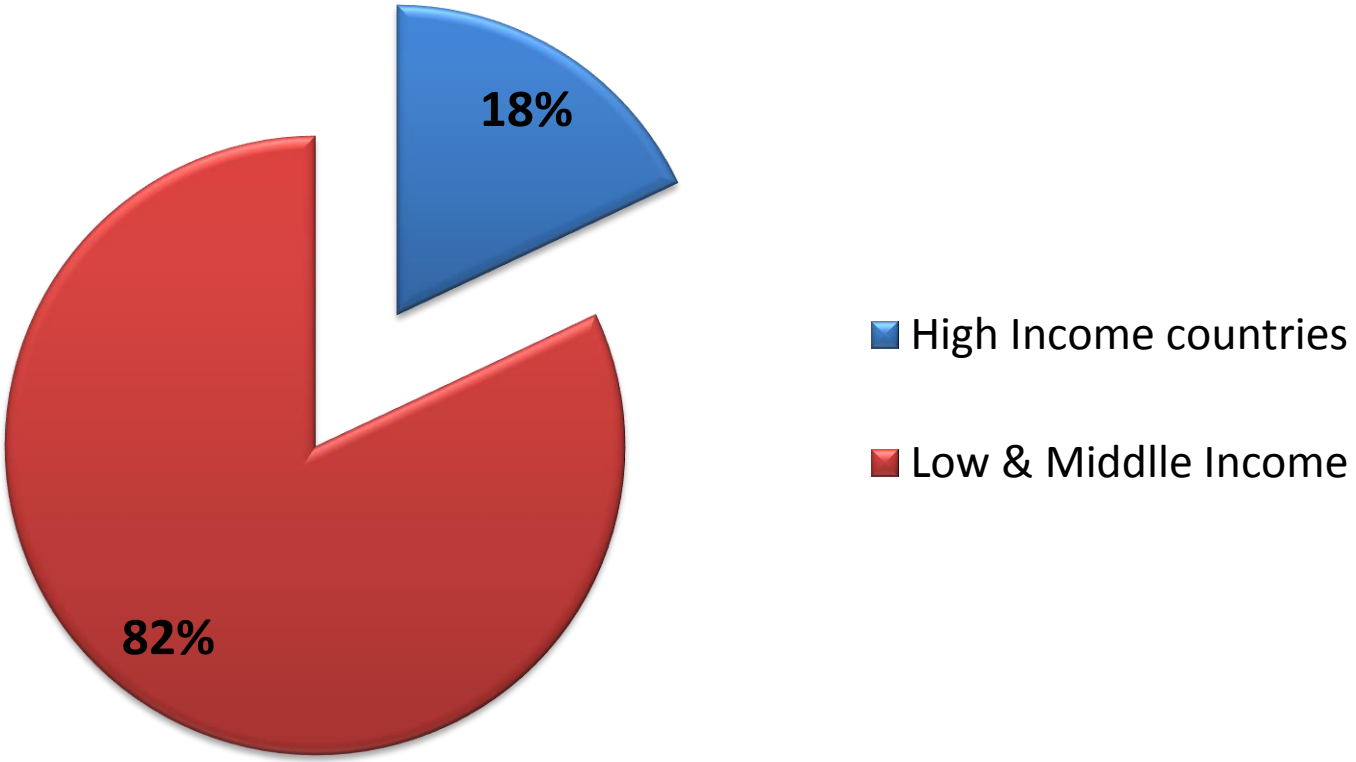


Source: Data computed from Global Status Report on Road Safety 2015, WHO

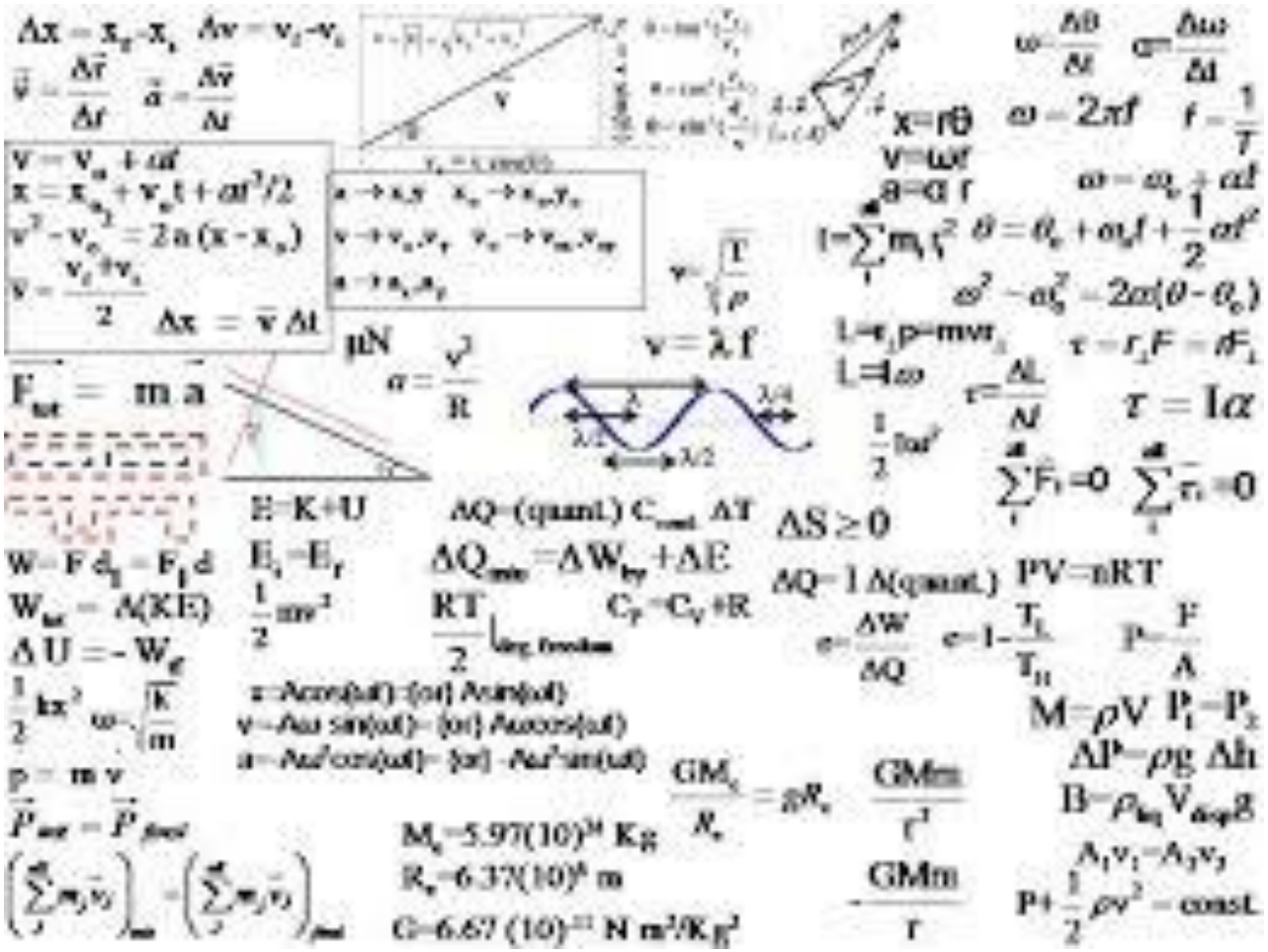
Road Traffic Fatalities



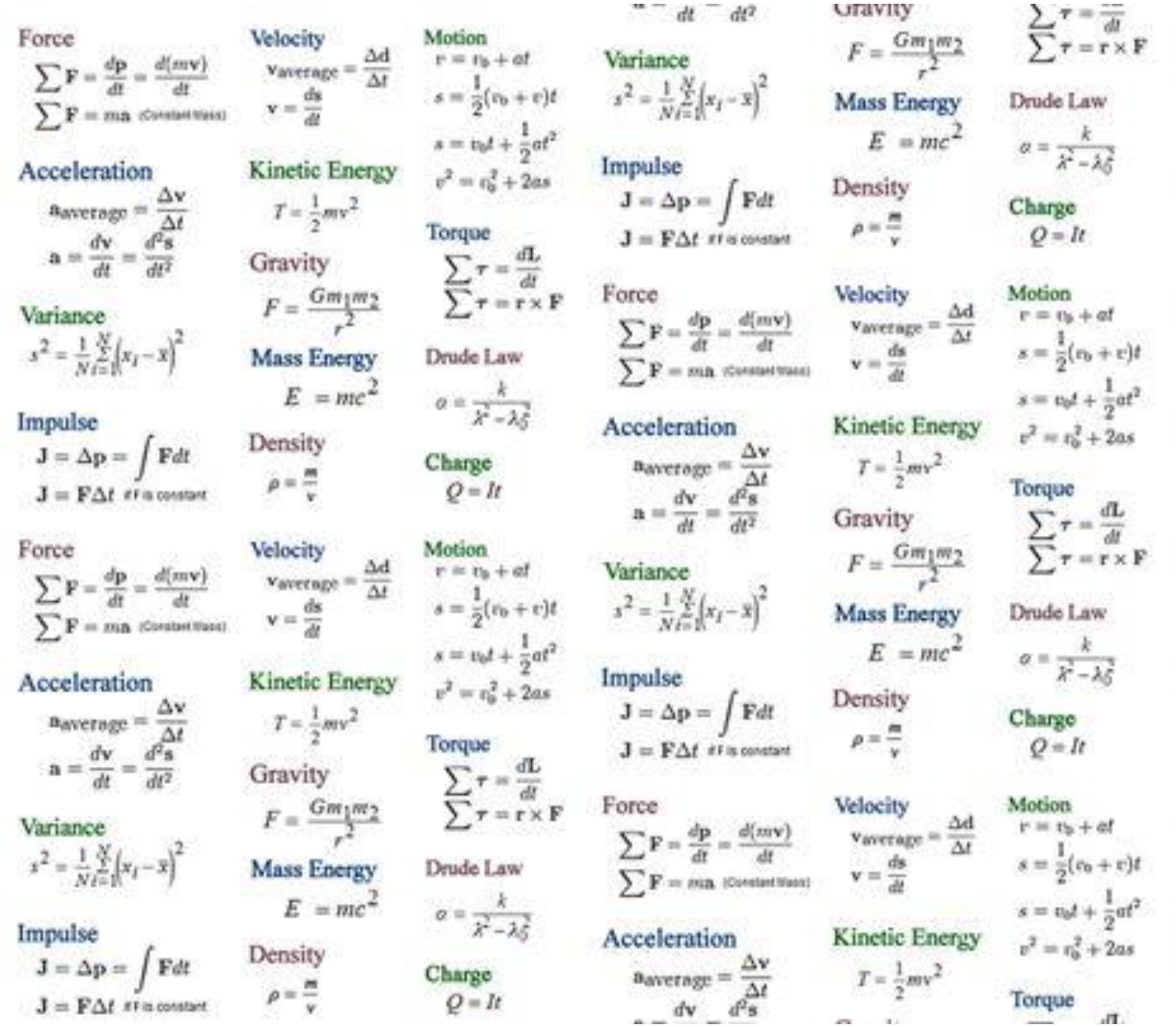
World's Population



Solution to Road Safety in Emerging Economies 1



Solution to Road Safety in Emerging Economies 2



WHAT PART OF

$$F_s = \iiint_v \beta_\rho \, dv + \iiint_v \left[\ddot{R} + \left[2\omega V_{xyz} \right] + \left[\dot{\omega} x r \right] + \omega x \left[\omega x r \right] \right] \rho \, dx =$$

$$\oiint V_{xyz} \left[\rho V_{xyz} \cdot dA \right] + \frac{\partial}{\partial t_{xyz}} \iiint_v V_{xyz} \left[\rho \, dv \right]$$

DON'T YOU UNDERSTAND?!

General Prescription from Developed Countries

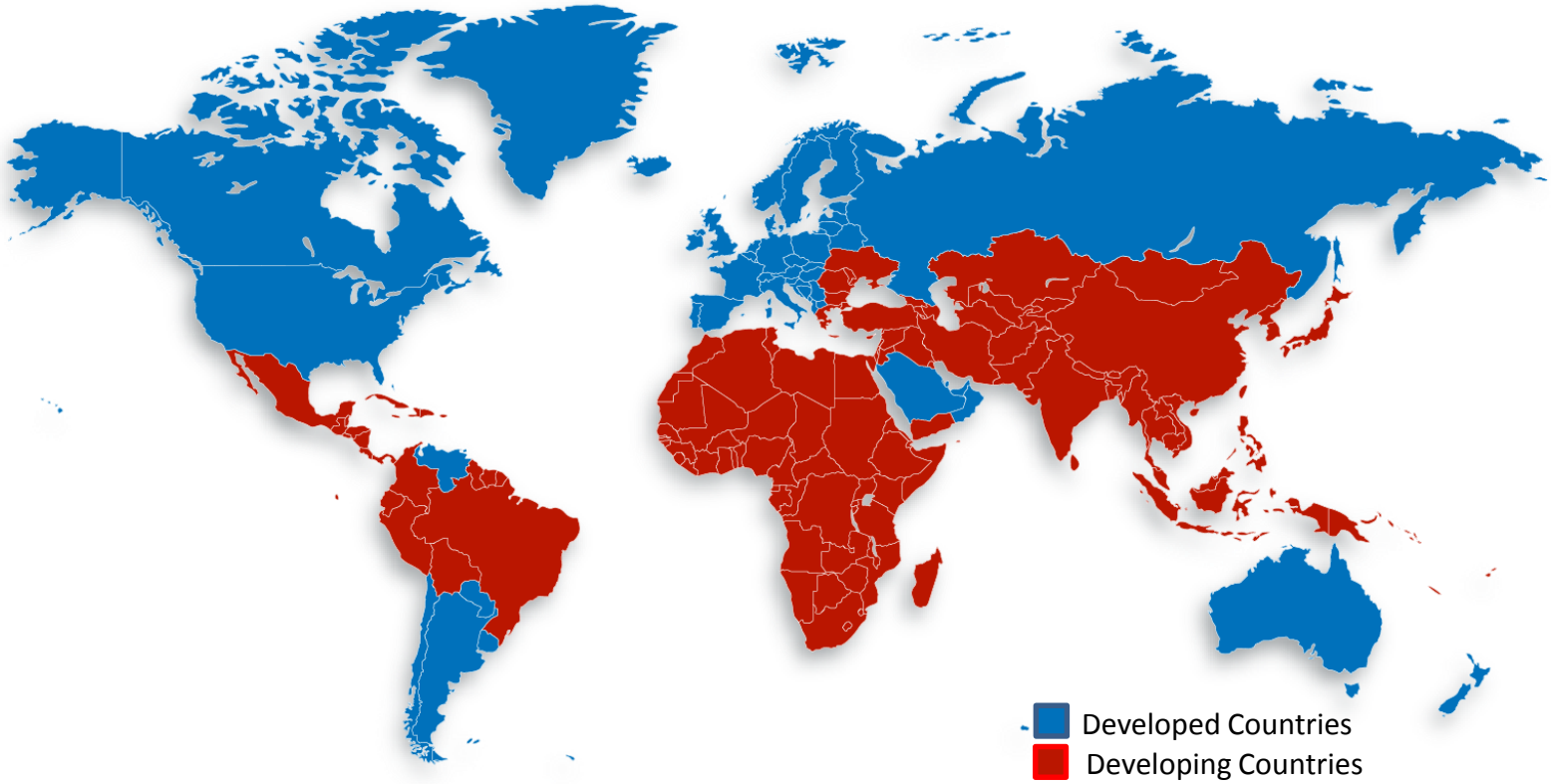
Comprehensive Safety Prescription

- Seat Belts
- Helmets
- Reduce Speeds
- Drunken-driving
- Road Safety Awareness

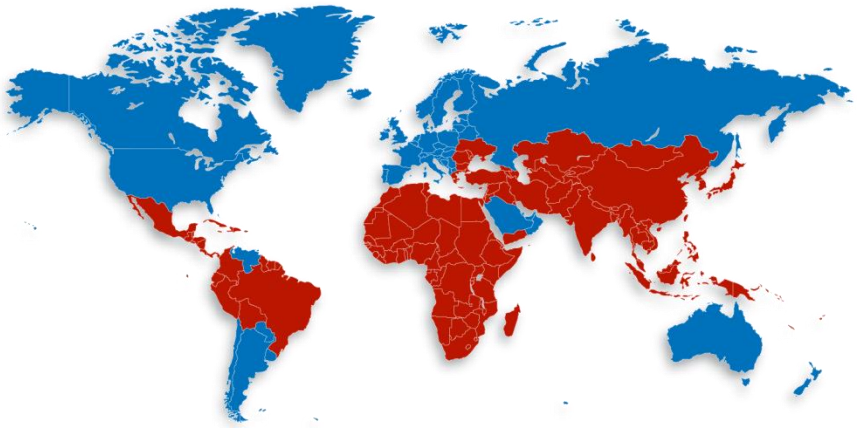
OR

Traffic in Developing Countries

I recognized that there are literally two worlds on this planet and they co-exist…



Developed Countries



Developed Countries
Developing Countries

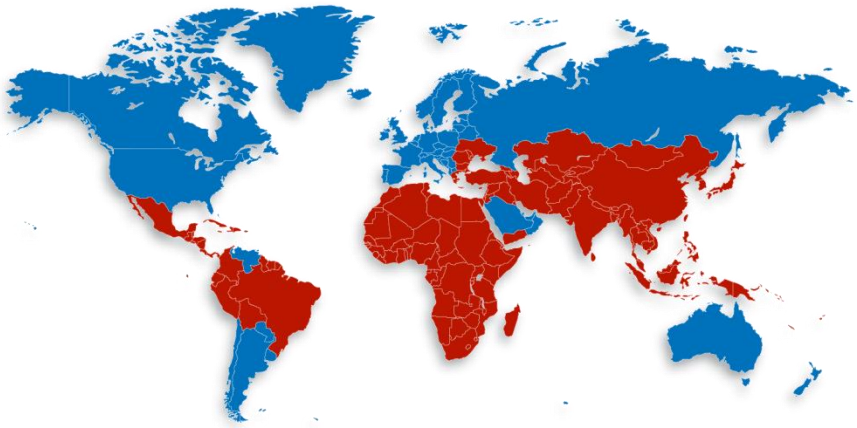
Countries of Developed World

Where

- engineering is to perfection
- research is setting the path for innovations to solutions,
- most drivers receive a license after proper training and testing
- enforcement agencies are fully trained
- government does not look out to public to carry out post-crash management
- road crash investigation is scientific

Road Safety has a totally different approach in a developed world : Awareness levels are high and one keeps improving it further

Developing Countries



Developed Countries
Developing Countries

In developing countries, Road Safety is a confused phenomenon, much hyped and misled

Road safety can only be achieved by plugging the deficiencies, developing and effective coordination and supplementing these with education

Safer Roads

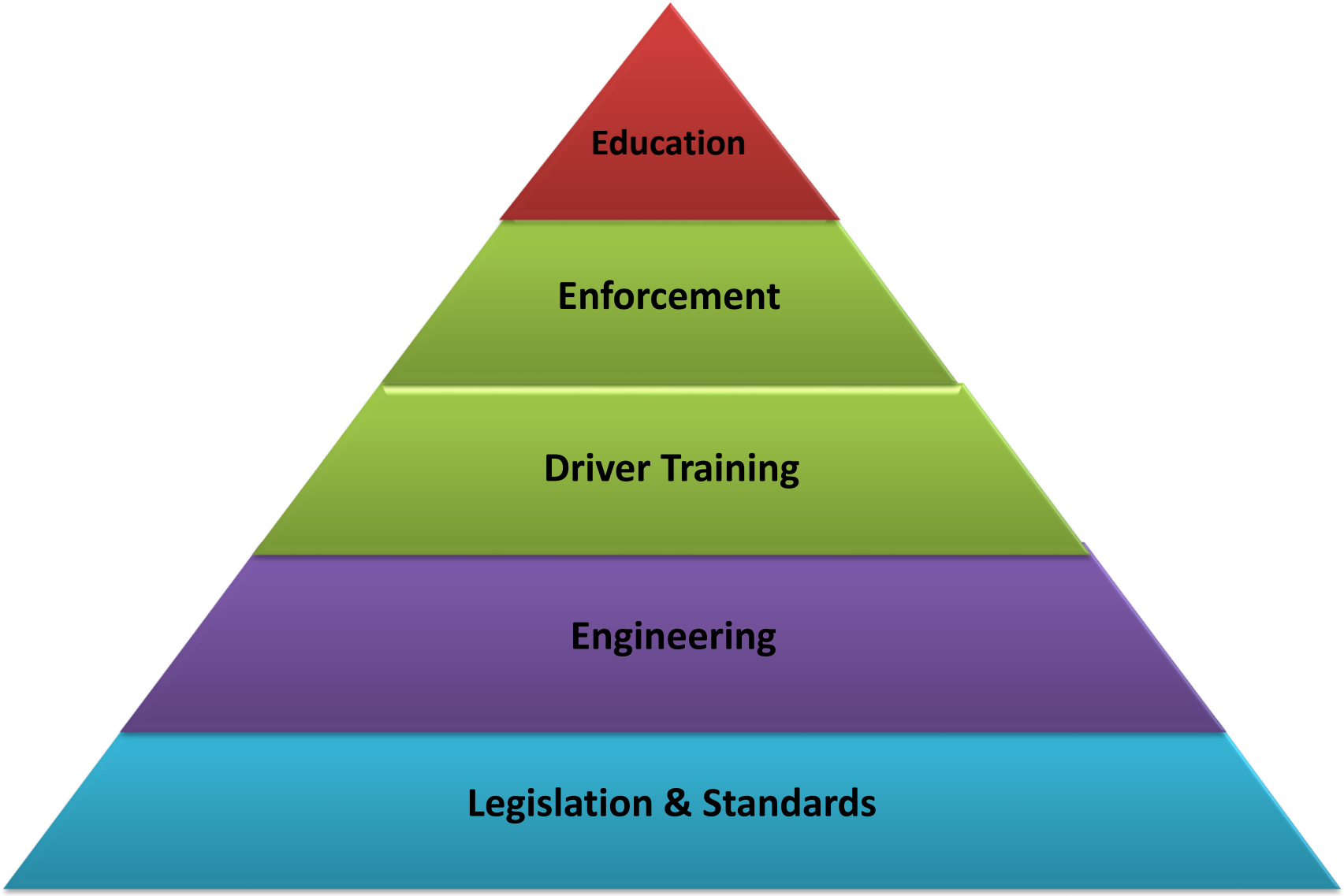
Value of Data: Causative Factors
Road Crashes, Road Traffic Violations

- Absence of Scientific Road Crash Investigation
- Lack of training in Crash Investigation
- Absence of tools & systems of investigation & traffic enforcement
- Absence of training of enforcement agencies in traffic enforcement
- Outdated or not need based Legislations & Codes of Practice

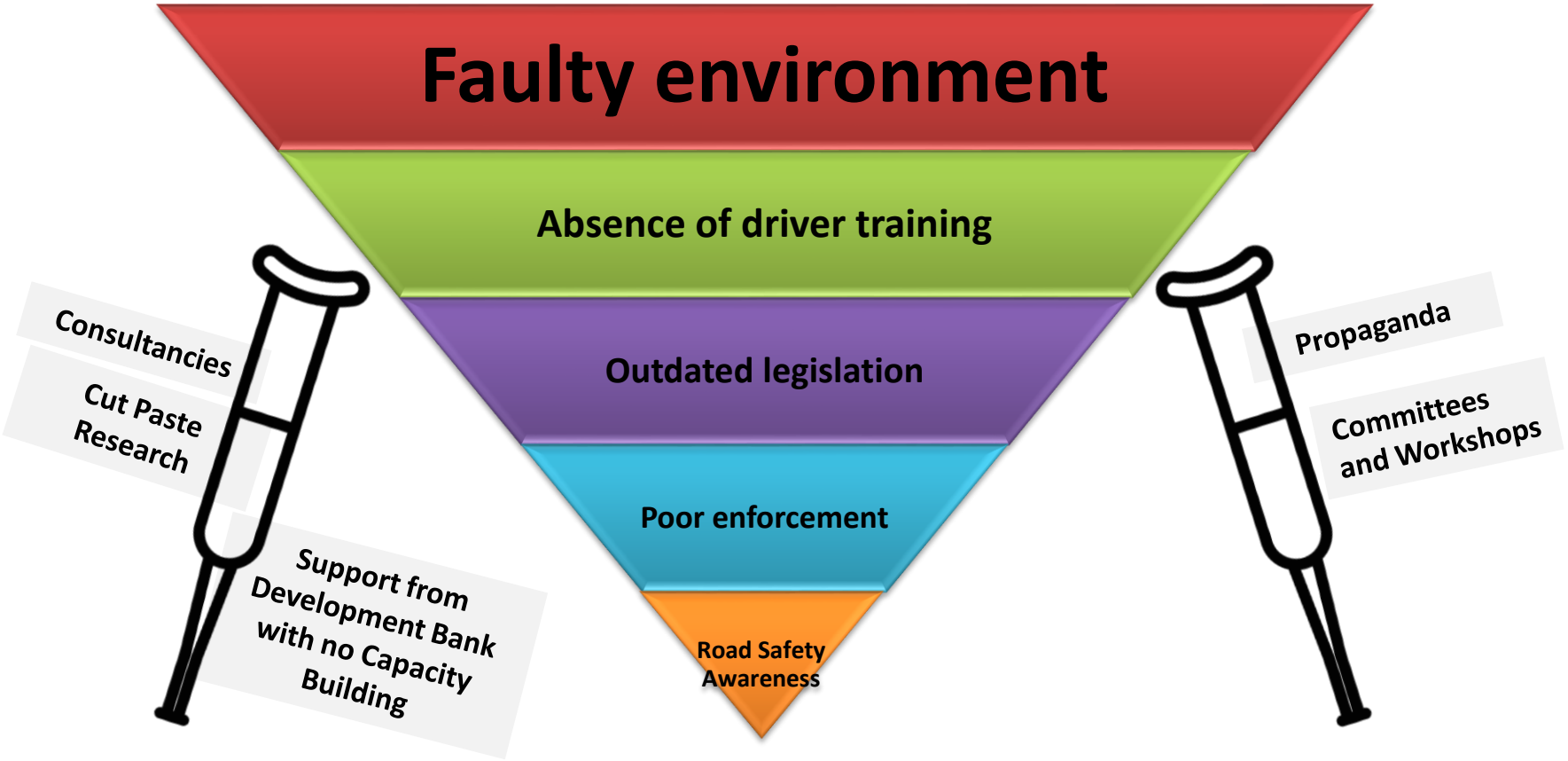
GiGo Value of Interventions

Garbage data leads to garbage diagnosis and ill founded remedial measures.


Non- research prescriptions have failed to improve road safety in the developing world


Education
Enforcement
Driver Training
Engineering
Legislation & Standards

Confused pyramid of road safety



United Nations A/RES/60/5

General Assembly

Distr.: General
1 December 2005

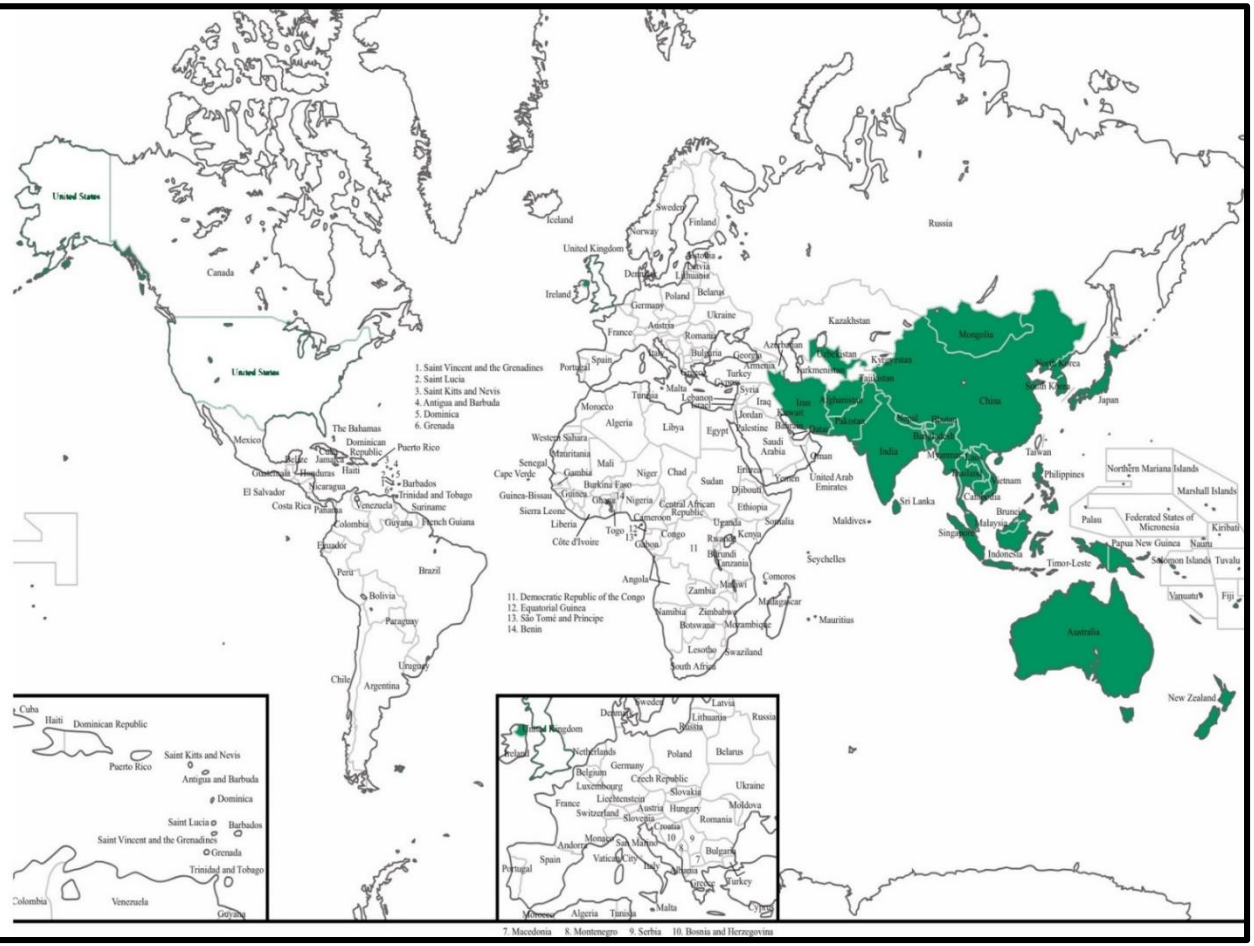
Sixtieth session
Agenda item 60

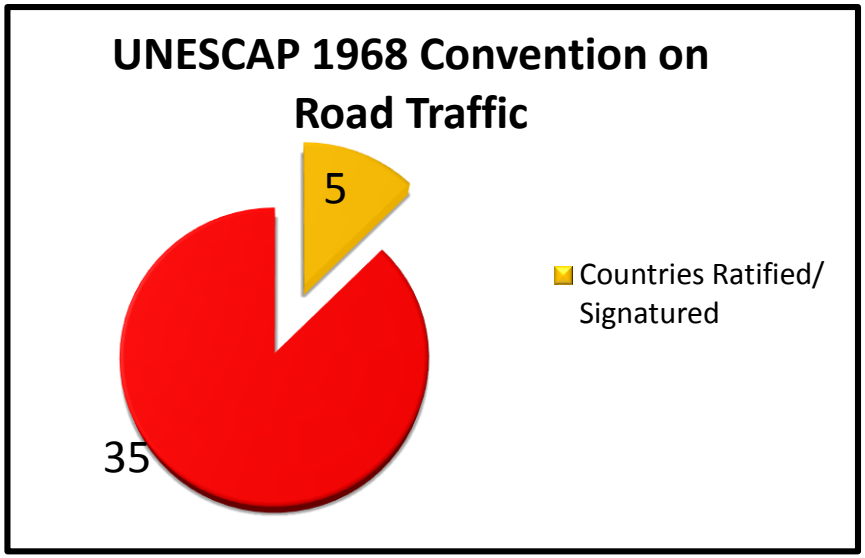
5. Encourages Member States to adhere to the 1949 Convention on Road Traffic and the 1968 Convention on Road Traffic and Convention on Road Signs and Signals, in order to ensure a high level of road safety in their countries

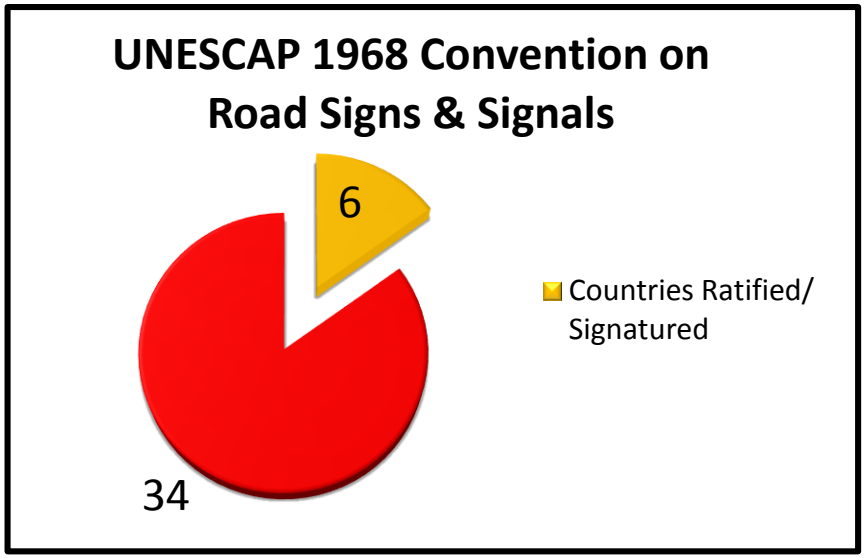
6. Stresses the importance of the improvement in the international legal road traffic safety norms, and welcomes in this regard the work of the Working Party on Road Traffic Safety of the Inland Transport Committee of the Economic Commission for Europe in the elaboration of a substantial package of amendments to the 1968 Conventions on Road Traffic and Road Signs and Signals;

UNESCAP: 733,463 (59.47% of Global Road Fatalities)

S.No	Member State	Estimated No. of Road Traffic Deaths
1	Afghanistan	6209
2	Australia	1363
3	Bangladesh	17289
4	Bhutan	96
5	Brunei Darussalam	27
6	Cambodia	2431
7	China	275983
8	Fiji	54
9	India	231027
10	Indonesia	42434
11	Iran (Islamic Republic of)	25224
12	Japan	6625
13	Kiribati	6
14	Korea (Democratic People's Republic of)	2614
15	Korea (the Republic of)	6784
16	Lao People's Democratic Republic(the)	1266
17	Malaysia	7085
18	Maldives	6
19	Marshall Islands (the)	4
20	Micronesia (Federated States of)	2
21	Mongolia	491
22	Myanmar	7177
23	Nauru	
24	Nepal	4787
25	New Zealand	398
26	Pakistan	30131
27	Palau	3
28	Papua New Guinea	892
29	Philippines (the)	8499
30	Samoa	30
31	Singapore	259
32	Solomon Islands	79
33	Sri Lanka	2854
34	Thailand	26312
35	Timor-Leste	219
36	Tonga	6
37	Tuvalu	
38	Uzbekistan	3107
39	Vanuatu	39
40	Viet Nam	21651
	Total	733463




UNESCAP 1968 Convention on Road Traffic
5
35
Countries Ratified/ Signatured


UNESCAP 1968 Convention on Road Signs & Signals
6
34
Countries Ratified/ Signatured

Unique Step towards

- Bridging the Global Forum for Road Safety (WP1) with South East Asia

The Project was Supported by

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, USA

Ministry of Road Transport & Highways
Government of India

FIA Foundation
for the Automobile and Society

TOWARDS ZERO FOUNDATION

Consultation with

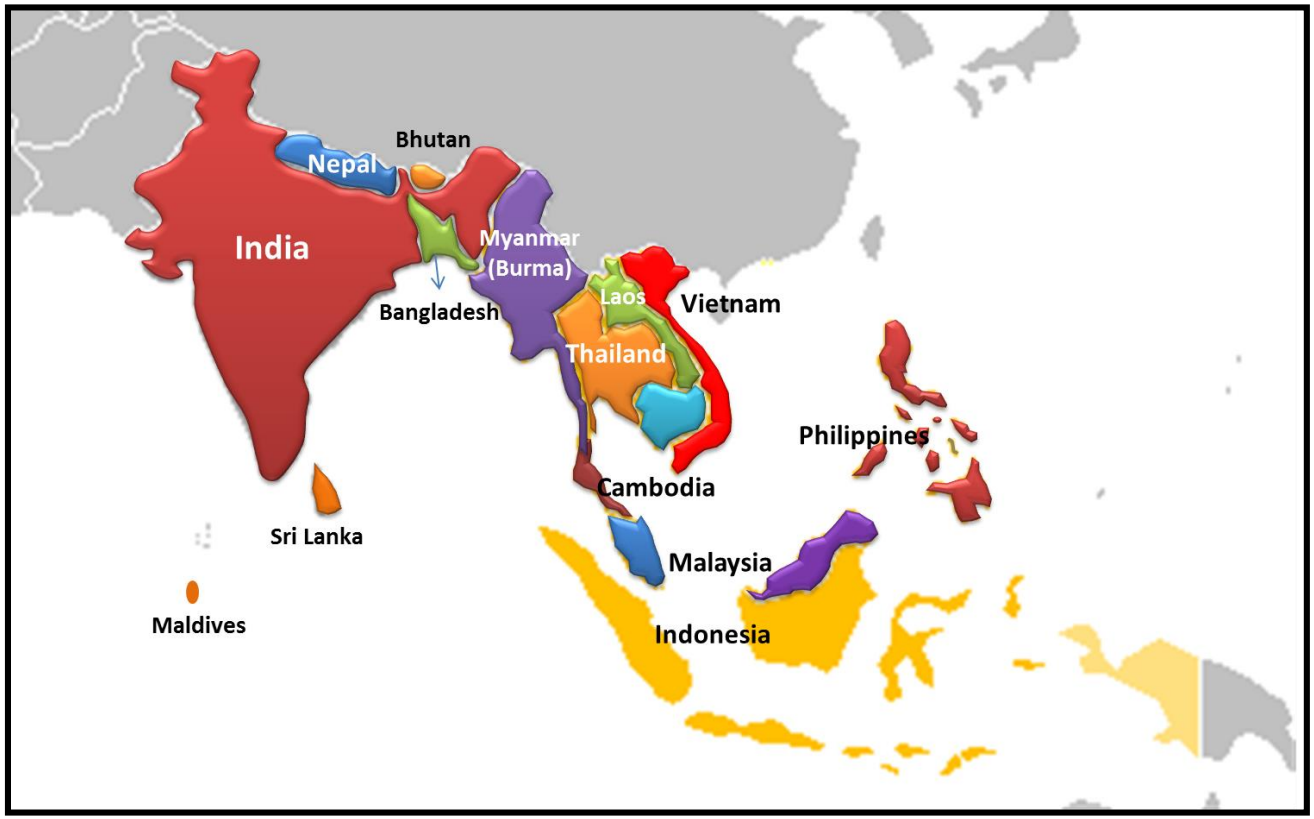
UNITED NATIONS
ECONOMIC COMMISSION
FOR EUROPE

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

IRTE Institute of Road Traffic Education

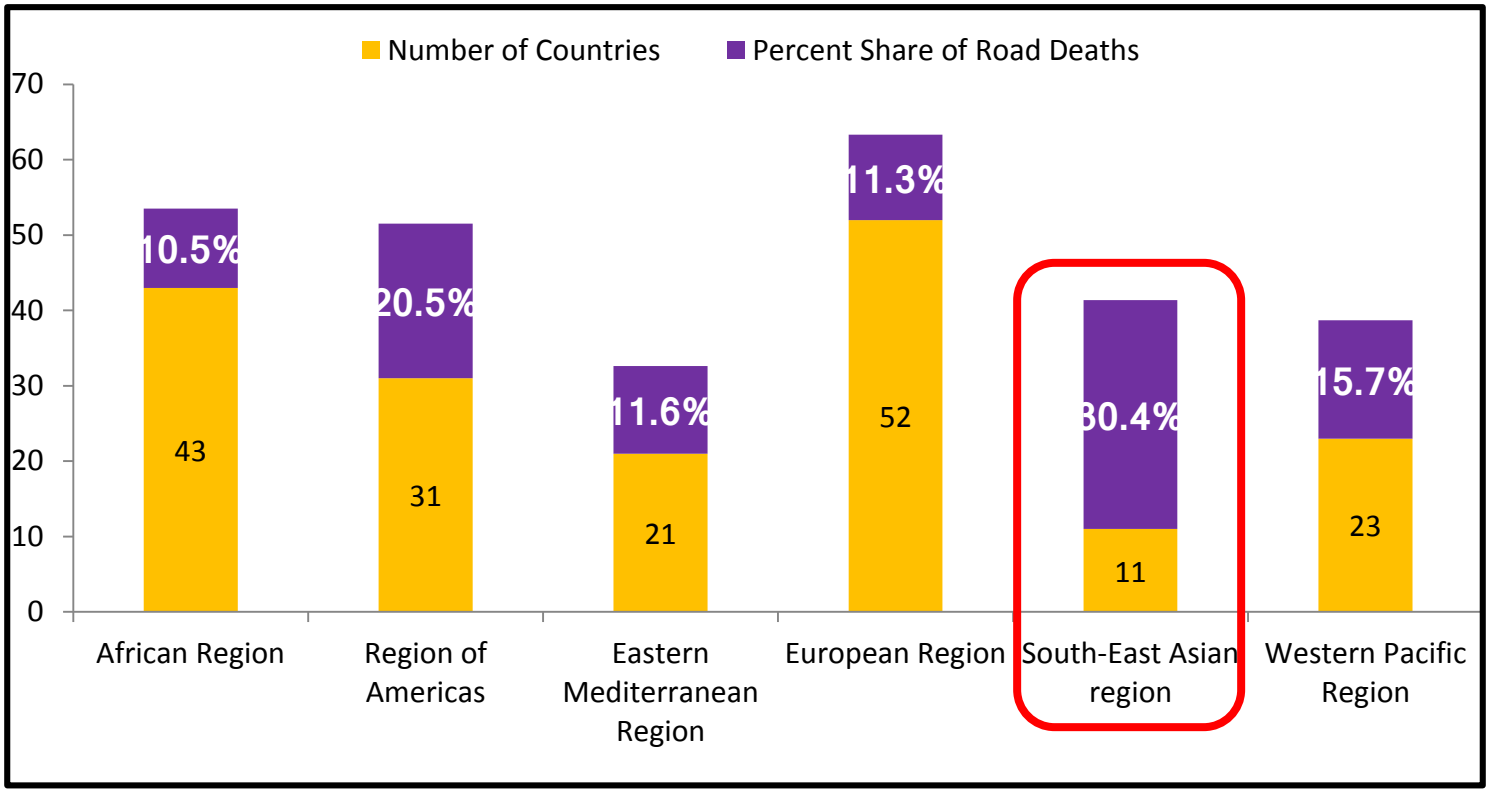
Round Table Meeting at UNECE: March, 2015

PTW Dominated Region of South East Asia



There is a priority need for development of research focused on PTW safety for the traffic systems of SE Asia

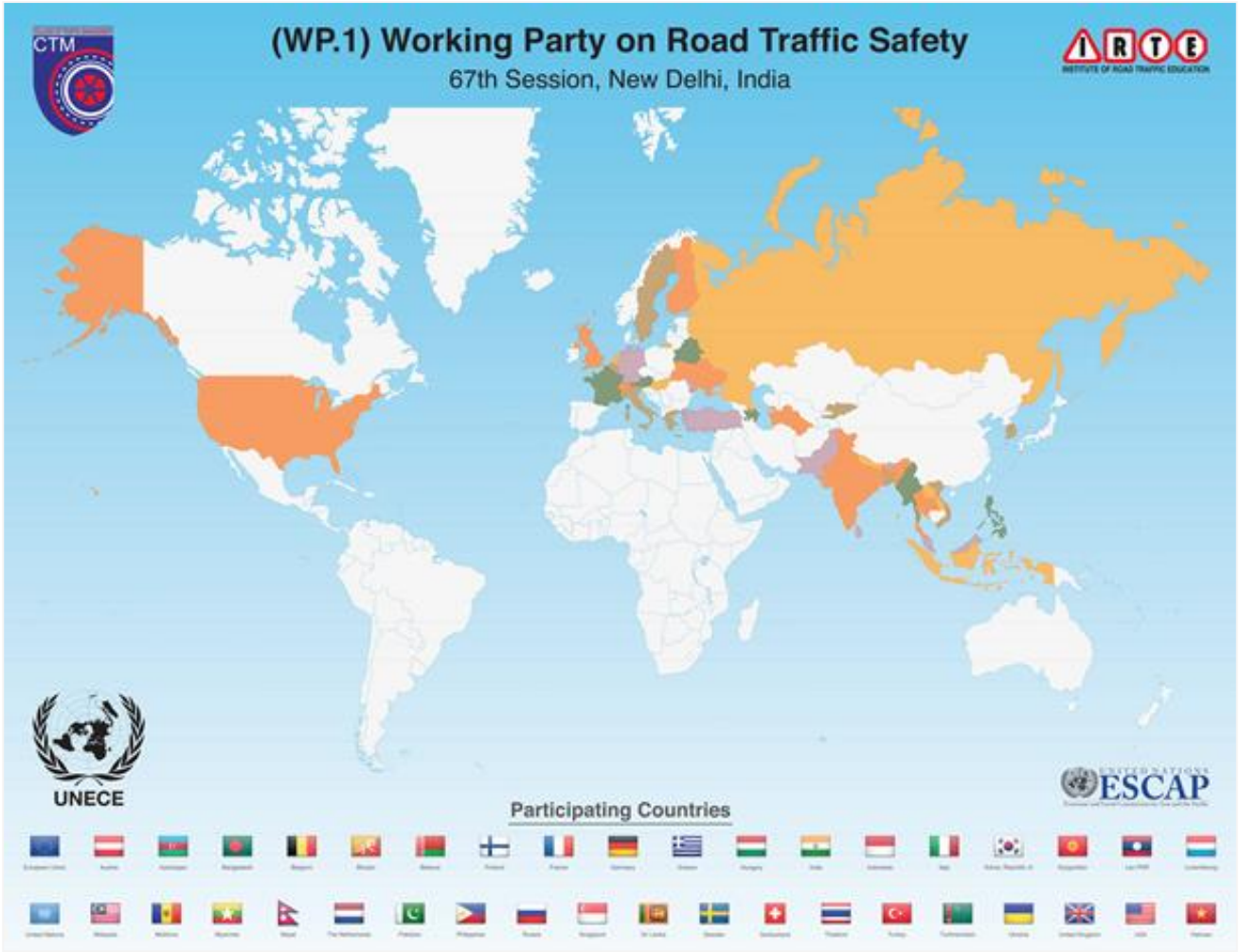
Highest % age of road deaths in the world are in South East Asia Region



Source: Data computed from Global Status Report on Road Safety 2015, WHO

67th Session of the WP.1: 5-6 December, 2013

Members from 38 Countries participated



IRTE specially created the Road Safety Hall of Nations at the College of Traffic Management to host the first WP.1

Philosophy of PTWs in Emerging Economies

Transportation

Passengers

Cargo

Taxi

School Children

Ambulance

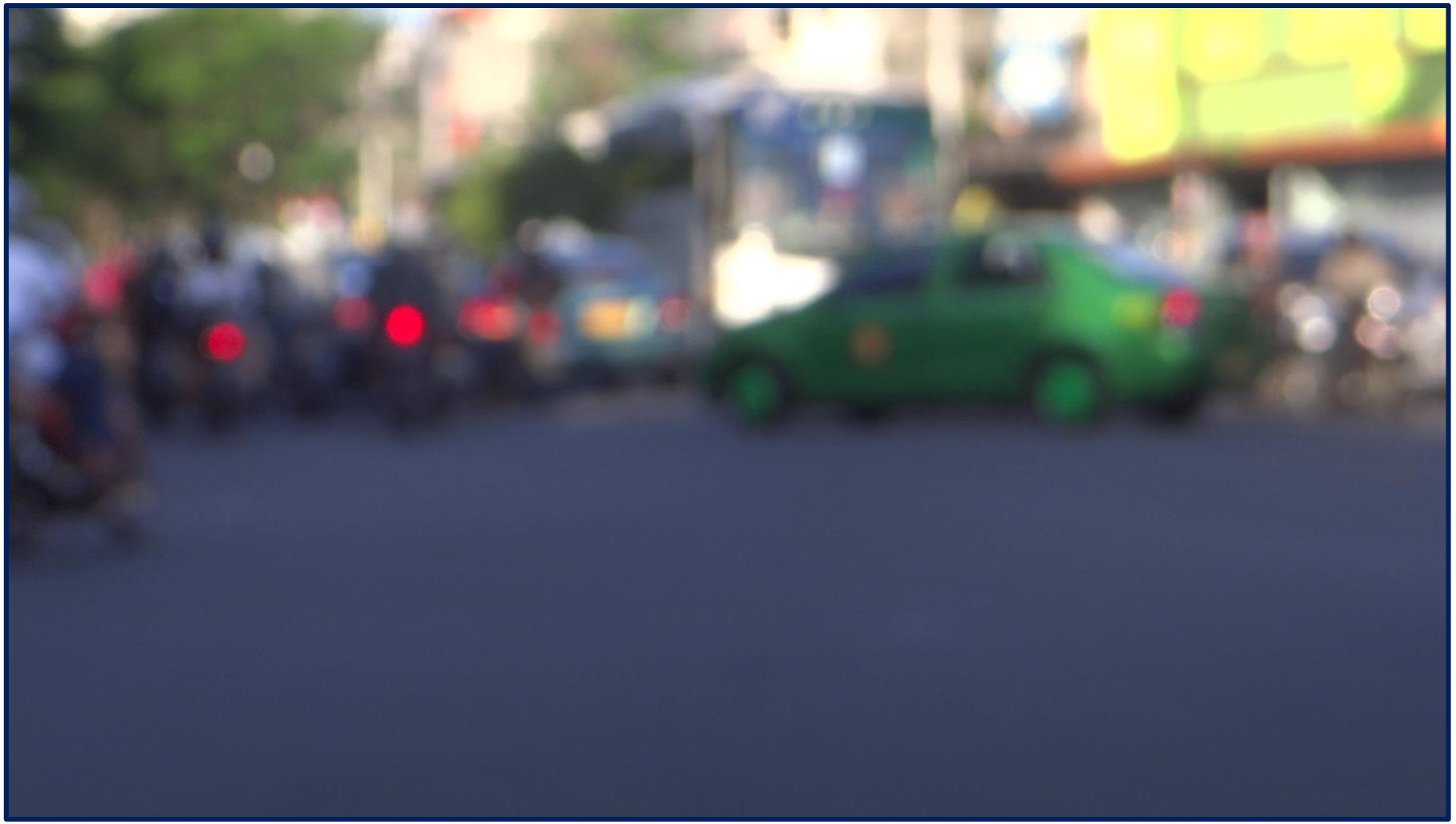
Enforcement

Sports & Tourism

Traffic Review- Vietnam

Traffic Review- Vietnam

Traffic Review- Indonesia



Traffic Review- Philippines

Traffic Review- India

Endeavour to collaborate

towards developing together

practical

“Road Safety Management”

in South East Asia Region

India February 2016

IRTE
INSTITUTE OF ROAD TRAFFIC EDUCATION

CONFERENCE

SAFETY OF POWERED TWO WHEELERS AND VULNERABLE ROAD USERS

NOVEMBER
28-30
2016

(With Special Focus on South East Asia)

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, USA

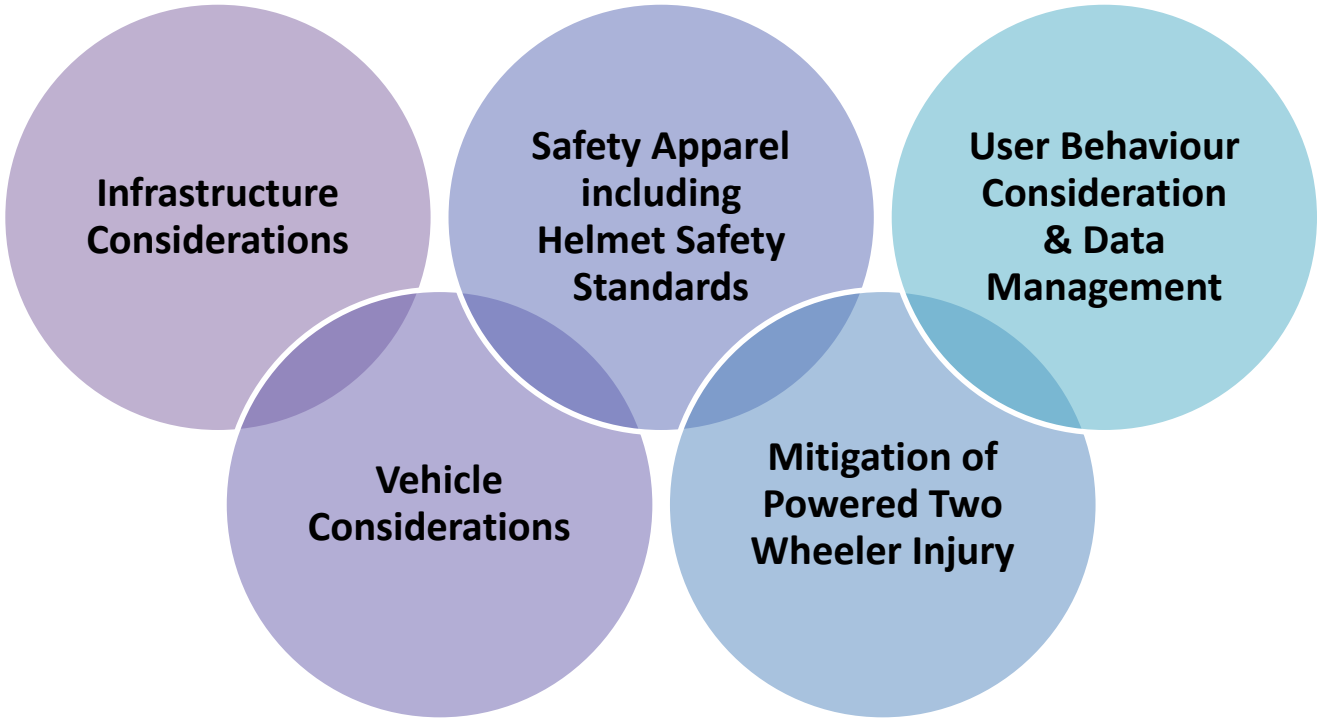
Ministry of Road Transport & Highways
Government of India

FIA Foundation
for the Automobile and Society

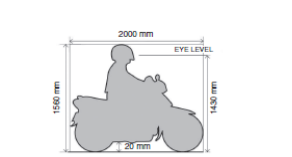
India, 28-30 November, 2016

Integrated
Safe Systems Approach

Five Areas of Enquiry

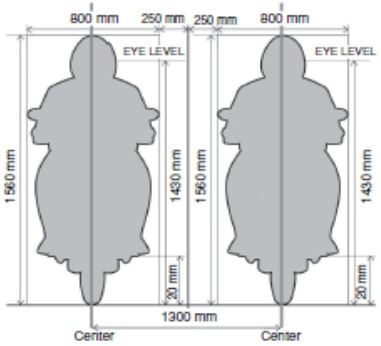


Considerations for Road Infrastructure

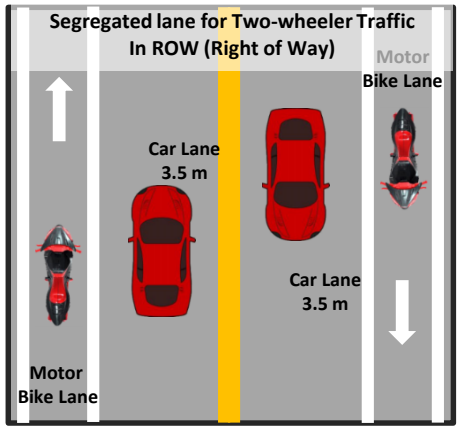


ig. 5 Physical length of a static motorcyclist - 2.0m

Physical width of a static motorcyclist - 0.8m



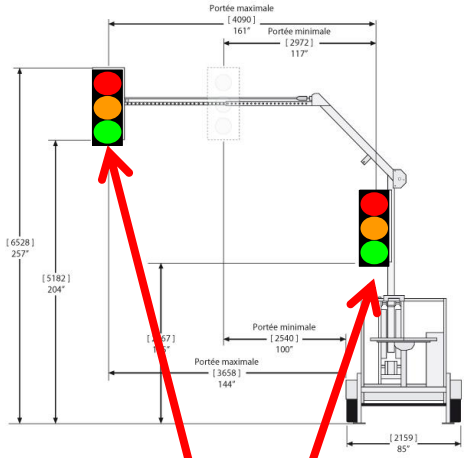
Side-by-side motorcyclists separation distance of 0.50m



Good Practices

Considerations for Road Infrastructure

Height restriction for Traffic Light Pole



Good Practices for Height restriction of Traffic Light Pole For PTWs

Various Shapes of Road Signs

Various Colors of Road Signs

- **RED** - stop
- **GREEN** - direction
- **YELLOW** - general warning
- **BLACK&WHITE** - regulation
- **BLUE** - motorist service (e.g., gas, food, hotels)
- **BROWN** - recreational, historic, or scenic site
- **ORANGE** - construction or maintenance warning

Concept of Forgiving Roads

Concept of forgiving roads + Crash barriers / Soft barriers = Enhance Two-wheeler safety

Retro reflectivity in Road Signs, Markings & Signals

Retro reflectivity in road signs plays a big role in road safety and prevent roadway departure crashes by making the signs appear brighter and easier to see and read at night

Two-Wheelers License and Permits

Learners Permit

Provisional or Probationary License

Full Time Driving License

Training Module for Two Wheeler Riders

1: Basics of Driving

- Introduction to the problems faced by the driver in the current road and driving environment
- Attitude of a Driver
- Expected Qualities of a Good Driver
- Driver Etiquettes
- Expectations from the Company (Company Guidelines if any)

2: Traffic Control Devices & the related Legislation

- Importance and understanding of Road signs, Markings and signals
- Recognition - Meaning – Action
- The Rules of the Road Regulation and The Right of Way

3: Road Sense – Art of Defensive Riding

- Code of Conduct on Road
- Moving Off, Lane Discipline, Overtaking, Speed Management
- Use of Mirrors
- Driving in Adverse Conditions (Night Driving/ Bad Weather)
- Stopping/Parking

4: Human Behaviour

- Stress and Fatigue
- Drunken Driving
- Drugs and Medicines
- Distracted Driving
- Aggressive Driving and Road Rage

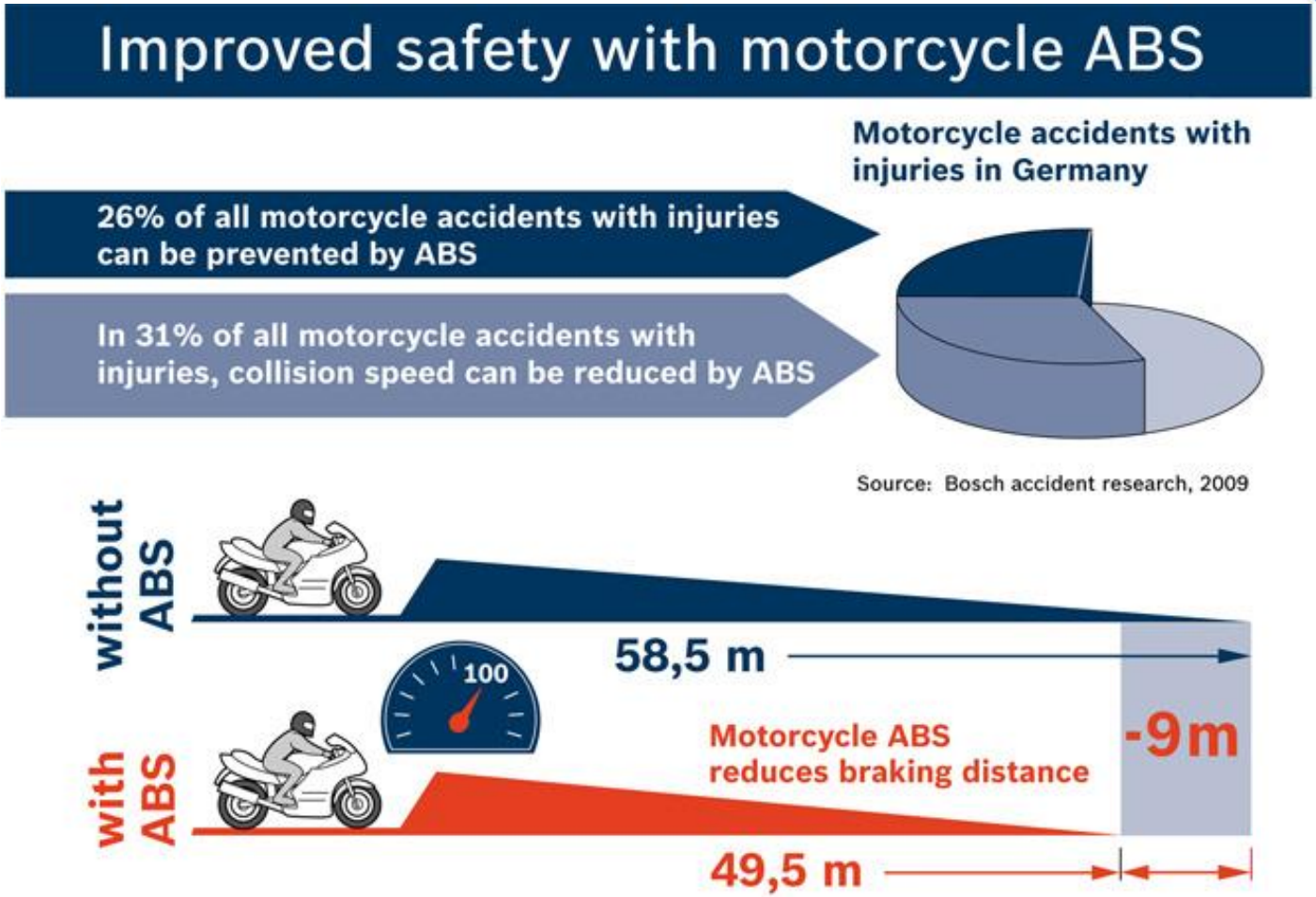
5: Emergencies and Incidents

- Handling Emergencies
- Vehicles/Human Reporting Systems
- Police and Owners

Evaluation

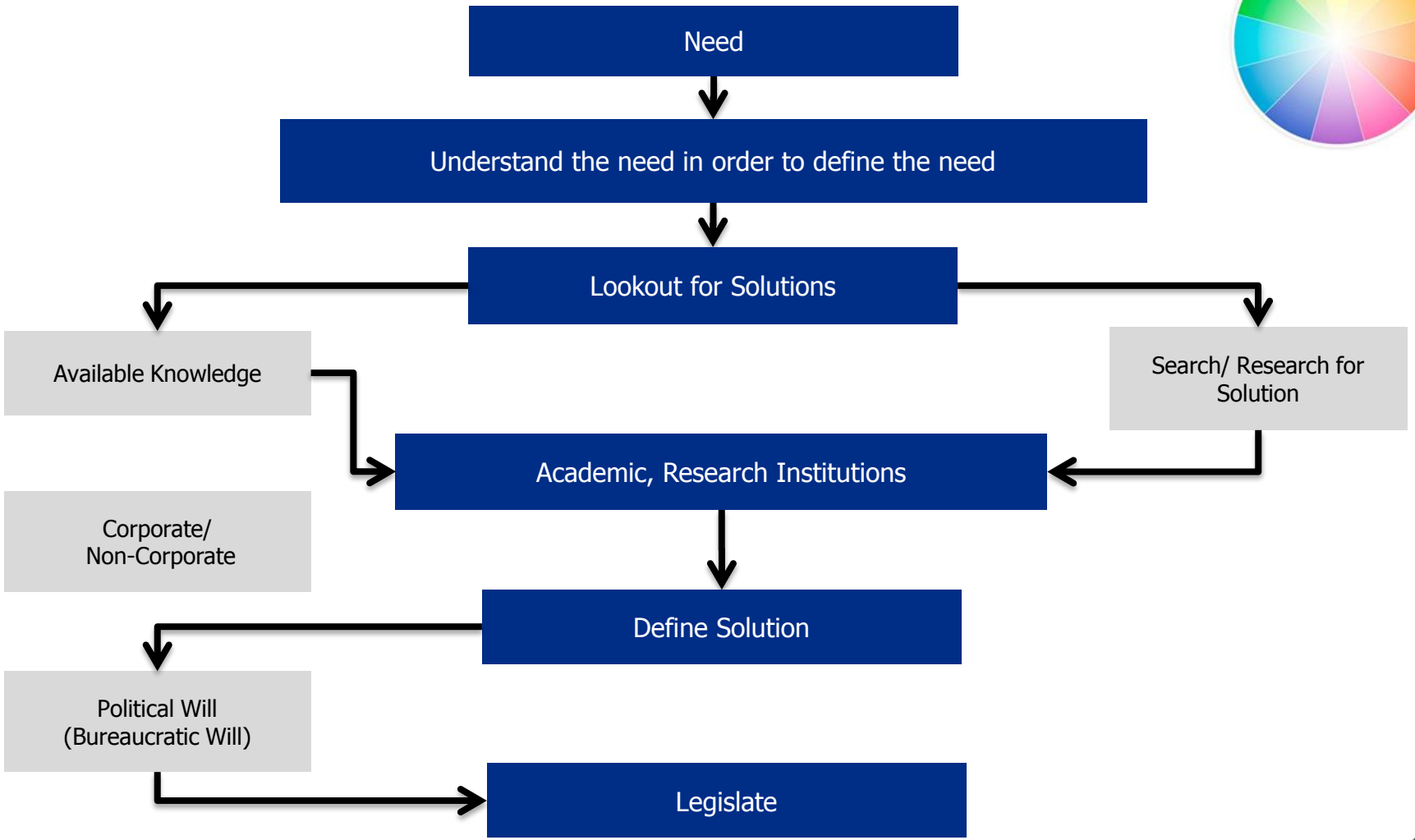
PTW Rider Safety Apparel

Vehicle Considerations



Mitigation of PTW Injuries

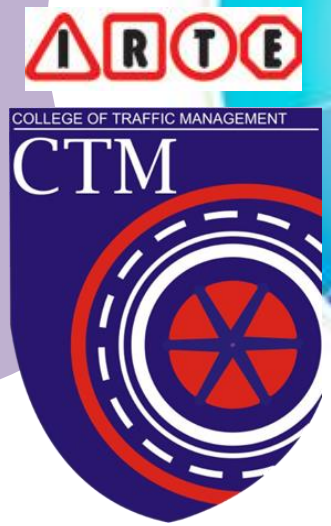
The Process:
From defining a need to Legislation



Contribution of IRTE and College of Traffic Management

We are beginning these Courses this year in “Traffic Management” & “Forensic Engineering”

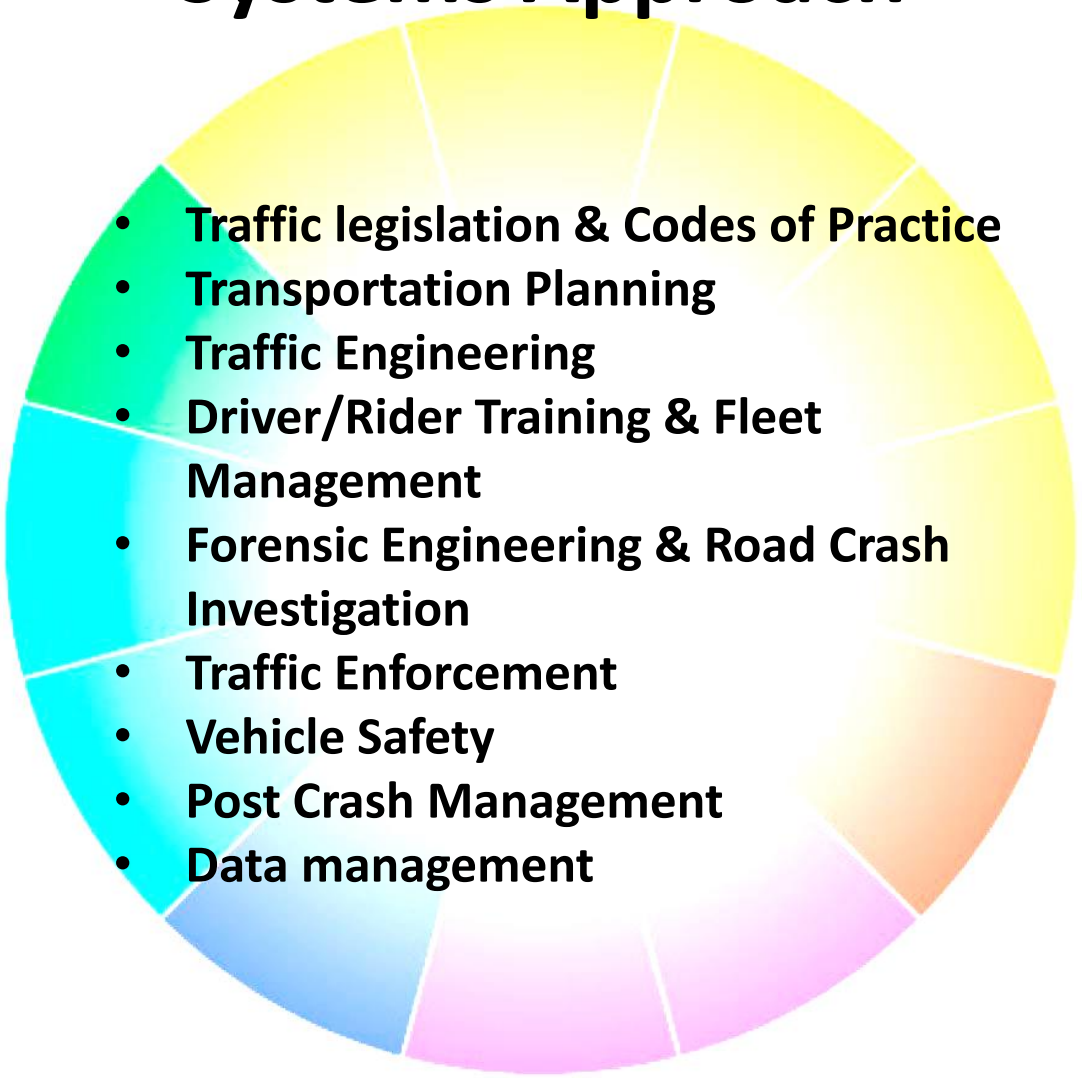
(to improve Road Safety)



We aim to support countries in the South East Asia in capacity building of trained managers

MSc. Post Graduate Course in Traffic Management

Each Subject evolves around the Safe Systems Approach



Invite

Collaborations

Partnerships

Sharing of Good Practices

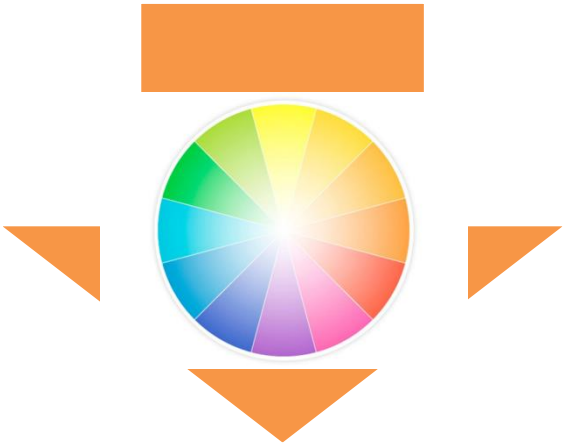
Knowledge Base

Research Support

Faculty

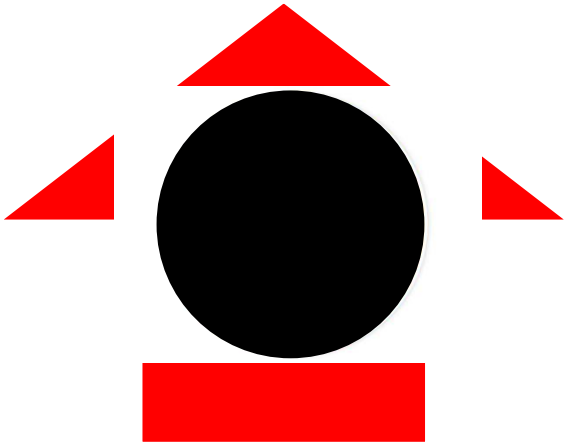
Towards Capacity Development
in South East Asia

Indigenous v/s Prescriptive Research



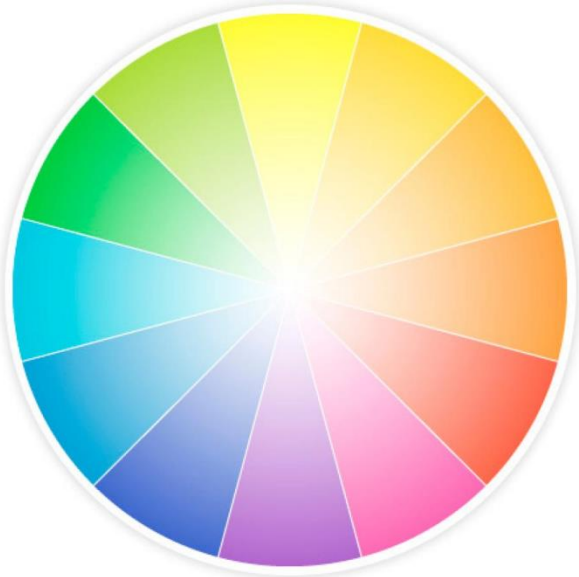
Support development of indigenous research within emerging nations

Discourage cut-paste or prescriptive research which does not relate to realistic needs of developing countries



Promote the Philosophy of Safe Systems Approach

- In the development of legal instruments
- Codes of Practice of Traffic Engineering
- Transportation Planning
- Driver Training & Assessment
- Traffic Enforcement
- Post-Crash Management



Thank You