



# Reflections on the policies for Powered Two-Wheeled Vehicles: A research and development perspective



Harry Evdorides *Dipl.Ing PhD EurIng MCIHT*, University of Birmingham, UK

# Contents

---

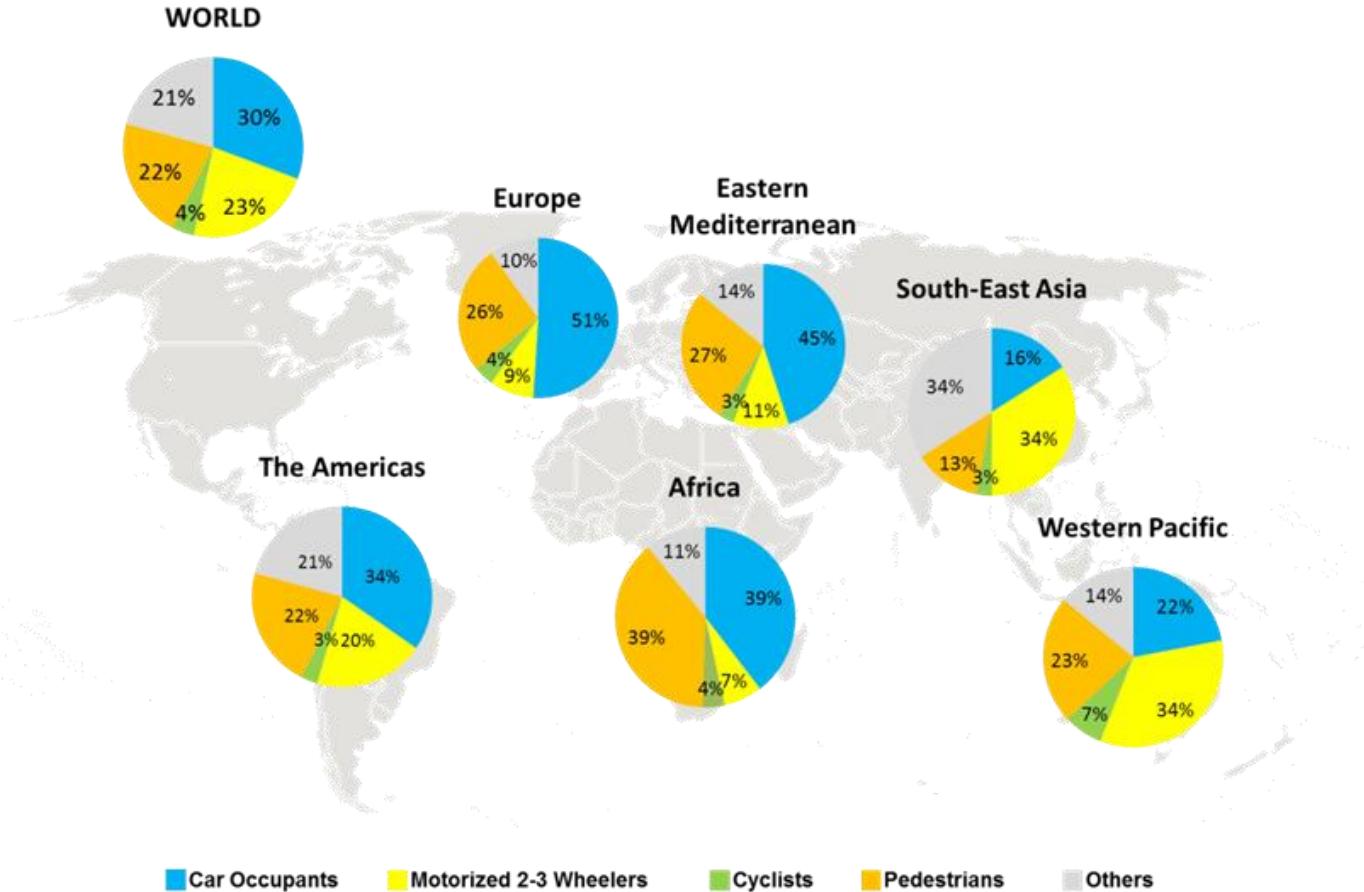
- ▶ The problem and mitigating actions
- ▶ The current Consolidated Resolution on Road Traffic
- ▶ Collaborative work





## The Problem and Mitigating Actions

# Road Traffic Deaths by type of Road User in WHO Regions



Source: *Global Status Report on Road Safety 2015, World Health Organization*

# WP1's role

---

- ▶ Enabling environment to address the issues concerned
  - ▶ Created the opportunity to examine the problem at hand
  - ▶ WP1 members recognised the need to reach out countries in South and South East Asia that did not take advantage and use the Conventions and Resolution in the last 60 years or so.
  - ▶ WP1 members supported specifically the need to focus on PTW safety
  - ▶ WP1 members supported an action plan to mitigate against the existing gaps of knowledge.
-



## The current Consolidated Resolution on Road Traffic

# Observations about the Resolution

---

- ▶ Part 1I (Rules related to vehicles and their use)
  - ▶ Chapter 6 Special rules related to two-wheeled vehicles
    - ▶ Recognizes the **vulnerability** of PTW vehicles
    - ▶ Recognizes **experience** as a key element in creating safe riding conditions
    - ▶ Recognizes the importance of **infrastructure** but perhaps not sufficiently explicitly
  - ▶ Chapter 7 Rules related to certain categories of transport
    - ▶ **Abnormal** road transport (in terms of dimensions and mass) does not consider clearly PTW
  - ▶ Chapter 11 Infrastructure and safety of TW vehicles
    - ▶ Section 11.2.1
      - Action (d) arguably seems to overlook **PTWs**



# Should the current policies be amended?

- ▶ The policies are comprehensive of PTW needs but, being general, not focused on the predominant local conditions.
- ▶ Motorcyclists deaths are more than 30% of total road accident deaths (urgency)
- ▶ Traffic conditions are motorcycle dominated
- ▶ Environment is different: hot, sunny and/or humid
- ▶ Diversity issues (gender, religious, other)



# Abnormal road transport



Source: <http://www.dumpaday.com/wp-content/uploads/2011/09/overload8.jpg>



Source: <https://i0.wp.com/assets.nydailynews.com/.../ducks-motorcycle-hanoi-vietnam.jpg>



Source: <https://s-media-cache-ak0.pinimg.com/564x/525915586ea87bcf88b41124.jpg>



Source: [amusingTHAILAND.com](http://amusingthailand.com)



# Collaborative work

# Actions already taken

---

- ▶ PTWs Conference held in Delhi on 18th and 19th February 2016



- ▶ Establishment of coalition of Universities

# Coalition of Universities

- ▶ IRTE (Institute of Road Traffic Education) – India
- ▶ University of Birmingham, UK
- ▶ Universities and research organisations from
  - ▶ The Philippines
  - ▶ Vietnam
  - ▶ Indonesia
  - ▶ Thailand
  - ▶ Malaysia
  - ▶ Sri Lanka
  - ▶ Myanmar
- ▶ Engagement with the Industry, Public and Private sectors



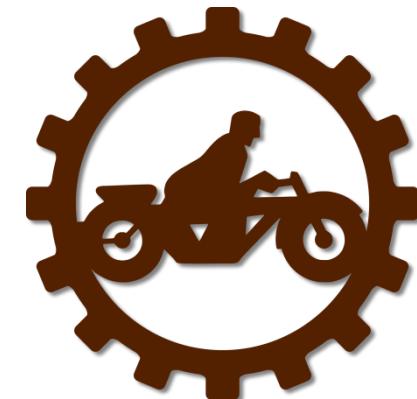
# Reasons for participation

---

- ▶ UoB recognises WP1's work as key in International Road Safety
- ▶ UoB's highways group focuses on developing countries since its establishment with the support of the then UK's ODA (Overseas Development Administration and currently DfID – Department for International Development)
- ▶ UoB highways group is actively involved in the collaboration to support and conduct research focused on international needs of road safety (currently 8 PhDs programmes are running)
- ▶ Experience shows that there is a need for a local proactive facilitator and it seems that IRTE (Institute of Road Traffic Education) is the *de facto* centre of activities or even excellence in the region.
- ▶ Forward looking approach with international support from organisations such as USA's NHTSA and the FIA Foundation.

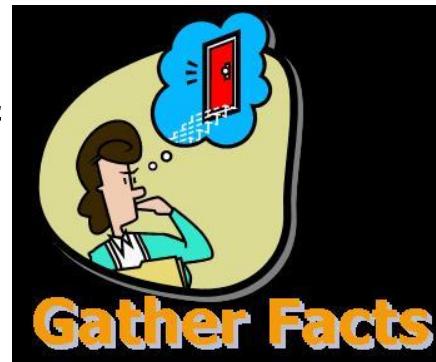
# Proposal

- ▶ Develop the background work (at technical level) for an Annex to Consolidated Resolution
- ▶ Principles:
  - ▶ Directional
  - ▶ Non-prescriptive
  - ▶ Transferable
  - ▶ Adaptable
- ▶ Contents may include:
  - ▶ Plan to address PTW occupancy
  - ▶ Plan for segregating traffic
  - ▶ Plan for helmet use
  - ▶ Plan for data collection, use and management



# Potential focus areas

- ▶ Implications of the specific **traffic compositions** not found elsewhere. PTW % is very high; can be as high as 90%
- ▶ Consideration of PTW safety in terms not only of **costs** but also of **benefits** (economic and social)
- ▶ Reflect social, gender and environmental issues
- ▶ Project the importance of **data** and suggest minimum data requirements and use of data
- ▶ Project the importance and use of a minimum set of **safety performance indicators** and define them as part of road safety plans



# Options (based on existing literature)

- ▶ Speed management  
(enforcement and information)
- ▶ Control of longitudinal and lateral distances
- ▶ Segregated lanes /  
Channelisation using painted road markings
- ▶ Emphasis on, and development of, demand management (non-asset solutions) using operational, regulating and educational methods.

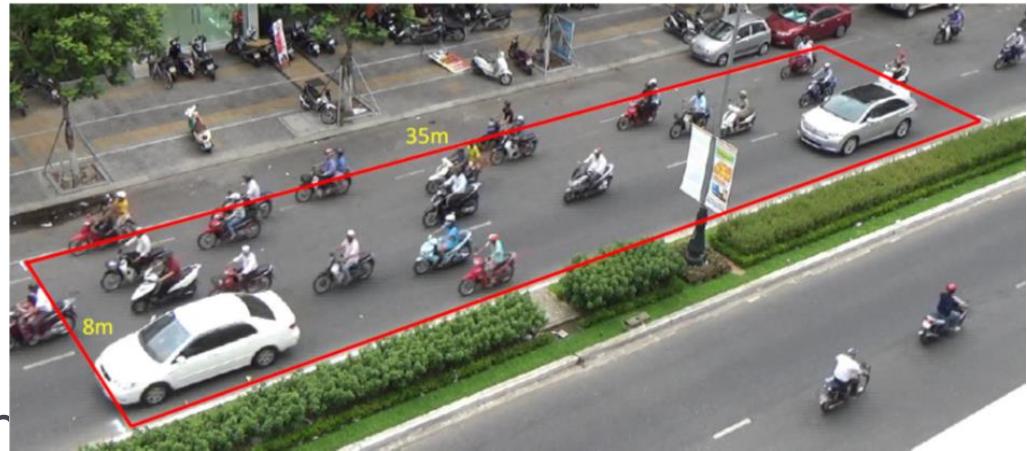


[www.sheffield.gov.uk](http://www.sheffield.gov.uk)

# Options (based on new research)

- ▶ **Accident contributing factors** in motorcycle-dominated traffic conditions and related to road infrastructure such as:

- ▶ operating speed
- ▶ speed difference
- ▶ traffic density
- ▶ front distance
- ▶ lateral clearance
- ▶ road surface condition



- ▶ Improve **training** – fundamentals of road safety are not understood by road safety professionals

# Forthcoming conference

---

- ▶ PTWs Conference to be held in Delhi on 28 - 30 November 2016
- ▶ Preliminary programme
  - ▶ Day 1
    - ▶ Objectives, Current Partnerships, SE Asia Road Safety Status (Governme Role of PTW safety, UN role
  - ▶ Day 2
    - ▶ Strategies, R&D Studies findings
  - ▶ Day 3
    - ▶ Contents of Annex, Vulnerable road users, Data issues



# Forthcoming conference: Expectations

---

- ▶ Comprehensive participation of WP1 members to attend the Conference to share, exchange and communicate their knowledge and best practice
  - ▶ To enrich the number of views to be heard
  - ▶ To support the continuity of the overall initiative for improving the safety of PTW
  - ▶ To strengthen proposals aimed at improving policies for PTW in SE Asia





Thank you

Harry Evdorides, University of Birmingham, UK