

## EDITORIAL

## OPEN ACCESS

# Reversing the Trend of Motorcycle Crashes Towards a Continuous Decline

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## 1. Background

Report from the World Health Organization (WHO) shows an alarming figure of 1.35 million deaths annually in the past few years due to road traffic crashes in the world (World Health Organization, 2018). Road traffic injuries is now the leading cause of death for children and young adults 5-29 years of age. Recognizing the importance of the problem, the United Nations General Assembly declared a Second Decade of Action for Road Safety 2021-2030 (2nd DOARS) with the target to reduce road deaths and injuries by at least 50% by 2030. It is a continuation of the earlier 10-year period action plan to further accelerate progress towards achieving the goals of United Nations 2030 Agenda for Sustainable Development (SDGs 2030) for road safety.

A high-level report published by the Academic Expert Group (AEG) of the Swedish Transport Administration for the 3rd Global Ministerial Conference on Road Safety held in Stockholm in 2020 proposed 9 recommendations to be adopted by all countries in line with SDGs 2030. These recommendations cover all aspects that are possible to address road safety issues, from management best practices, human behaviours, road engineering to vehicle safety (Swedish Transport Administration, 2019). The recommendations were seriously deliberated during the Ministerial Conference and further embedded into the 2020 Stockholm Road Safety Declarations. The Declarations was then further endorsed as one of the United Nations General Assembly Resolution.

One important recommendation in the AEG report indicated the use of vehicle safety technologies. Much evidence show that these advanced vehicle safety technologies is currently saving lives all over the world. The good news for Malaysia and other low-to-middle income countries is that these technologies have been proven to reduce motorcycle-related crashes. What makes them more viable is the fact that the cost of computing equipment needed to build these safety systems are getting cheaper nowadays. The only challenge is to create demand for these technologies and sustain the supply chains of production. But these are not impossible if every single party understand and commit to the roles and responsibilities within the business model, including both the government and the private sectors.

## 2. Strategizing a quick win for motorcycle safety in Malaysia

Due to the higher vulnerability of sustaining severe injuries, motorcycles are less preferred by those who can afford cars. Those who could not afford a car have no choice but to rely on motorcycles as their mode of transport even on road infrastructure that is built for long distance and high-speed travel. Motorcycle ownership has been rising throughout the years, and they are the most vulnerable road

users as far as crash statistics is concerned. For the past one decade, motorcyclists contributed more than 60% of the total fatalities on Malaysian roads (Royal Malaysian Police, 2019). Such burden to a country socio economic progress is caused by among others, increased motorcycle uses on high-speed road networks (Law et al., 2009).

Addressing road traffic injuries among the motorcyclists has been one focal agenda of the Malaysian government since the 1990's. Initiatives were formulated based on recommendations by the Road Safety Research Centre of Universiti Putra Malaysia which identified several major issues giving rise to increased risk of motorcycle crashes. The initiatives were implemented under several national programmes focusing on exposure control, conspicuity, behaviour modification, road engineering and injury control (Radin Umar, 2006). Despite showing some positive results on reducing the rate of motorcycle crashes and injuries, the actual number of fatalities continues to rise over the years. New intervention aside from these initiatives should be introduced to significantly reverse the trend of rising motorcycle crashes towards a continuous decline.

Adapting automotive technologies is one of the quick wins in reducing road traffic injuries. These emerging technologies are already saving lives in many countries. The fact that vehicle use is rising justifies investment from manufacturers to do their part by making safer cars more affordable. The scale effect of more people using safer cars should help to reduce road traffic injuries in a short time period. The emergence and development of safety technologies in passenger cars not only bring a significant impact to car occupants injury reduction but also to the safety of motorcyclists. Vehicle crash avoidance systems such as frontal crash prevention, lane departure and blind spot detection have been proven to prevent up to 10% of all police-reported motorcycle crashes in the United States of America (Teoh, 2018).

Meanwhile, safety technologies in motorcycles such as the Anti-lock Braking System (ABS) and the airbag have been shown to benefit motorcyclists to a great extent. The improved stability and braking performance provided by ABS were linked to reduced crash severity as studied in Sweden (Rizzi et al., 2016) and Australia (Savino et al., 2019). The latest development in the industry sees the possibility of the Motorcycle Autonomous Emergency Braking (MAEB) as being another technology to be marketed. In several studies, MAEB were found to be able to reduce the impact speed and injury risk of motorcyclists (Savino et al., 2014; Lucci et al., 2021). It however comes with certain limitations and more studies in different road and traffic environment are needed.

Nevertheless, making these technologies available in the local market requires a holistic plan and strategies to achieve the intended outcome. It takes more than political will to realize the achievement of such initiative and having a sustainable business model by the automakers is equally important. As a result of the Covid-19

pandemic, many automakers face the challenge to restore production and sales. The impact brought about by the pandemic also affect those in the supply chain of the automotive industry. But as long as the demand for motorcycles is still high, the need for mandating safety technologies in motorcycles in Malaysia is very much critical.

### 3. Malaysia to leverage on The Global Plan: Decade of Action for Road Safety 2021-2030

A guiding framework to achieve the targets of the 2nd DOARS was established in the form of The Global Plan by the WHO, the UN Regional Commissions, and many other stakeholders in the United Nations. This document describes what is needed to achieve the target of halving road deaths and injuries by 2030 and provides governments and partners a structured framework to implement initiatives following the principles of the Safe System Approach. The plan includes core values that inspire national and local government as well as all other stakeholders who can influence road safety such as civil society, academia, the private sector, donors, community, and youth leaders to develop action plans and targets. The plan also provides recommendations on proven interventions and best practices for preventing road traffic injuries.

Malaysia is a nation that is still developing where there is still opportunity to do things right in the beginning. The Global Plan serves as a guiding tool but what is more critical is to establish a sustainable investment mechanism to finance road safety initiatives. We need to identify sustainable sources of funding that are not only driven by a solid business case that shows good return-on-investment, but also acceptable to the public and the government. Another aspect that we should be looking into is our legal frameworks. It is not easy, but we have a strong foundation to build them based on the readily available UN road safety legal instruments such as those many road safety conventions that we have acceded, applied and enforced.

Capacity development among road safety professionals should also be given top priority. Compared to other countries, we are in a fortunate situation that we have established institutions of higher learning, research institute and civil societies that can take up the role of building the capacities of road safety practitioners. What should be intensified is to diversify the learning of road safety principles into academic curricula in various fields such as public health, transport, and urban planning. We should also strengthen advocacy and policy support for road safety efforts through producing more professionals in related fields such as journalism.

### 4. Conclusions

It is high time now for us to elevate the use of vehicle safety technologies to reverse the trend of motorcycle crashes and injuries in line with the call of the 2nd DOARS. There are still plenty of room for improvement in the current efforts and the need to fill the gaps should be recognized based on guided best practice. Therefore, we ought to leverage on the numerous resources made available by the international community to strengthen existing efforts and maximize the benefits of utilizing vehicle safety technologies in addressing motorcycle road traffic injuries. The UN SDGs 2030, The Global Plan and the AEG Report provide a good guiding framework for local stakeholders to formulate and align initiatives in accordance to worldwide best practices.

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