

Actual Situation of Traffic Accidents and Safety Management in Southeast & South Asia



According to the United Nations (UN), globally, nearly 1.3 million people die and an estimated 50 million people are injured each year by preventable traffic accidents. A further estimated 13 million deaths and 500 million injuries during the next decade are predicted. Against this backdrop, the UN has set a target to reduce the number of road traffic deaths and injuries by at least 50% in the decade 2021-2030. To achieve this goal, the UN published the ‘Road Safety Strategy’ in 2018 and the ‘Global Plan for a Decade of action for Road Safety 2021-2030’ in 2021.

This article provides an overview of the traffic accident situation in Southeast and South Asia and explains the road safety measures that companies should take with referring to the UN road safety measures.

1. The Number of Traffic Accident Fatalities in Southeast and South Asian Countries

Figure 1 depicts the number of road traffic fatalities in Southeast and South Asian countries and the number of road traffic fatalities per 100,000 population. In terms of the number of fatalities, India, due to its large population, stands out with the highest number of fatalities. On the other hand, when considering fatalities per 100,000 population, Thailand and Malaysia surpassed the global average. In other countries, the annual death toll ranges from thousands to more than 10,000 people, making it an important issue for all countries.

Figure 1: Number of road traffic fatalities in each country and per 100,000 population

	No. of Road Traffic Fatalities	Year	Per 100,000 Population
India	155,000	2021	10.9
Indonesia	27,531	2022	10.2
Thailand	14,741	2022	22.3
Philippines	10,839	2022	9.9
Vietnam	6,397	2022	6.4
Malaysia	6,080	2022	18.7
Myanmar	Approx. 3,000*1	2022	5.9
Singapore	108	2022	1.9
Japan	2,610	2022	2.1
World	Approx. 1,300,000*2	2021	16.4

*1 Estimated value based on 1,730 deaths from Jan to Jul in 2022 *2 WHO website
Source: Created by Writther based on various media

2. Road Safety Measures Announced by the UN

As mentioned above, the UN has published two key road safety measures: the ‘Global Plan for a Decade of action for Road Safety 2021-2030’ and the ‘Road Safety Strategy’.

The former primarily targets national and local authorities, promoting road safety policies and has fundamental five pillars of action: ‘multimodal transport and land-use planning’, ‘safe road infrastructure’, ‘vehicle safety’, ‘safe road use’ and ‘post-crash response’. The latter, on the other hand, is designed to prevent accidents involving UN staff working in different countries and encompasses five fundamental pillars of measures: ‘road safety management’, ‘safer fleets’, ‘safer road users’, ‘post-crash response’ and ‘safer driving environment’. The following five frameworks of road safety measures, arranged for companies with reference to these two measures by the UN, are explained below.

- Measure 1: Establishment of Road Safety Management
- Measure 2: Introduction and Management of Safer Vehicles
- Measure 3: Education for Drivers and Employees
- Measure 4: Post-Crash Response
- Measure 5: Establishment of Safer Driving Environment



The concrete measures under the five frameworks are as follows. You can use it as a check list to for omissions in your company's initiatives.

Measure 1 : Establishment of Road Safety Management

We recommend establishing traffic safety management as a foundation for promoting traffic safety measures. By establishing traffic safety management, it becomes possible to promote measures systematically and efficiently.

- 1) Establish standard to permit for operating a vehicle.
- 2) Educate road safety to drivers.
- 3) Collect road crash data.
- 4) Investigate and analyze the collected crash data.
- 5) Maintain safety by ensuring that vehicles are properly maintained and managed.
- 6) Secure sufficient fundings to carry out the above.
- 7) Secure the necessary personnel and assign them roles and responsibilities to carry out the above.

Measure 2 : Introduction and Management of Safer Vehicles

It is recommended that safer vehicles are procured, and that safety is maintained through adequate necessary inspections and maintenance.

- 1) Ensure that all vehicles and parts are operationally serviceable.
- 2) The vehicles should be of sufficient quality to allow safe inspection and maintenance.
- 3) The vehicles should be equipped with safety equipment that has proven effective (e.g. ABS and anti-skid systems).
- 4) To increase safety more, introduce on-board monitoring systems and telematics.
- 5) Safety technology should be introduced to reduce the risk for the vulnerable road users such as pedestrians.
- 6) Be equipped with first aid kits, fire extinguishers, triangular warning lights, spare tyres, jacks and appropriate tools.
- 7) Be equipped with devices to measure fatigue, physical strain and stress proactively, and take measures to reduce and mitigate these.

Measure 3 : Education and Safety Measures for Employees including Drivers

It is recommended that employees including drivers receive adequate and continuous road safety training.

- 1) Develop standard training and awareness-raising methods for road safety education and provide adequate teaching materials.
- 2) Provide sufficient and continuous road safety education using the above materials.
- 3) The content of the education should reflect the analyzed results of past accidents and the causes.
- 4) Develop and implement a communication plan that is sufficient and necessary to provide adequate road safety education.
- 5) Establish certain driving permit criteria and only allow employees who meet them to drive.
- 6) Rules that take into account driver fatigue and physical strain, such as setting limits on continuous driving time and travel distance per day, should be established and properly implemented.
- 7) Certain standard requirements for the transport and handling of dangerous goods should be established separately from driving permits and operated appropriately.
- 8) Taking medical examinations at least more than once a year should be one of the conditions for a driving permit.
- 9) Establish a system where safe drivers are recognized and supported and where driver who have caused accidents or violate the rules should take a program to prevent recurrence.
- 10) To give responsibility to those who provide training, and to monitor whether the necessary and sufficient training is being provided, and to intervene where necessary.

Measure 4 : Post-crash Response

First, recognize that despite all efforts, road crashes may still occur. It is recommended that response plans and procedures are in place in advance to ensure a smooth response in the event of an accident.

- 1) Ensure Standard Operating Procedures are in place for response and immediate actions to take if there is a crash
- 2) Ensure Standard Operating Procedures are in place for both the drivers and the companies.
- 3) Standard Operating Procedures for the driver shall include 'rescue of injured people', 'prevention of secondary accidents', 'report to emergency services, police, etc.' and 'report to the company'.
- 4) Standard Operating Procedures for the companies shall include 'providing instructions by telephone or other means' and 'rushing to the accident location and collecting information, if possible'.
- 5) After the initial response, measures to prevent recurrence are in place.
- 6) Measures to prevent recurrence should include 'confirmation of the detailed accident situation through interviews' and 'preparation of an accident report'.

Measure 5 : Establishment of Safer Driving Environment

In order to prevent environmentally caused accidents, it is recommended to set up a safer driving environment. This section focuses on the maintenance of the environment within the company's own premises, where the company's own company vehicles and visitor's vehicles pass through.

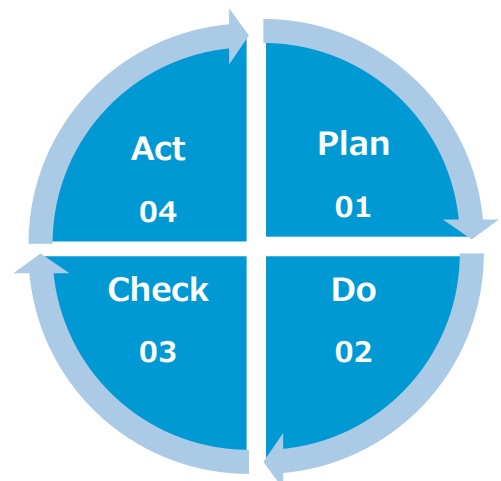
- 1) Observe where vehicles are parked and the route they travel and remove any obstacles that may pose a collision risk. If the removal is difficult, barriers should be installed to prevent damage to the vehicles.
- 2) Provide speed limits and stop lines to reduce the risk of accidents.
- 3) Separating the flow of vehicles and people to prevent collisions, e.g. by drawing lines in the premises.
- 4) Preventing collisions between vehicles by setting up one-way and ensuring that the flow of vehicles is in one direction.
- 5) Where necessary, install signs, signals, lighting, etc. on the premises and notify people of the rules for driving on the premises.
- 6) Compile the above measures, establish the rules for driving on the company's premises and notify them to employees and visitors.
- 7) Regularly monitor the driving conditions of vehicles on the company's premises and provide some form of guidance to those who violate the rules.

3. Summary

In the introduction of the five road safety frameworks, a total of 37 items were outlined, highlighting the extensive range of road safety measures that need to be implemented. Recognizing the magnitude of these measures, covering all of them might be a substantial undertaking. Therefore, it is recommended that the company assess the current state of its initiatives. If multiple areas in need of improvement are identified, it is advisable to take action incrementally, starting with the aspects that can be addressed.

Moreover, it is essential to understand that road safety measures are an ongoing commitment. They should not be seen as a one-time effort but rather a continuous process. ISO 39001, the international standard for road traffic safety management systems, clearly specifies the need to establish, implement, maintain, and improve an effective road traffic safety management system in line with the Plan-Do-Check-Act (PDCA) cycle. This standard outlines the requirements for organizations to implement these measures to prevent traffic accidents. For more comprehensive information, which goes beyond the scope of this document, please refer to the ISO 39001 specification and guidance.

<https://www.iso.org/standard/44958.html>



COLUMN: Dissemination Status and Introduction of EV (Electric Vehicles)

1. Dissemination of EV in Asia

From a global perspective, the number of EV/PHV (Plug-in Hybrid Vehicles) continuously increase, particularly in China, Europe and the USA. The table below summarizes trends related to the dissemination of EV in Southeast and South Asian countries. It shows that each country is promoting the dissemination of EV.

India	The Government of India established the ‘National E-Mobility Programme’ in 2012 and launched the ‘National Electric Mobility Mission Plan 2020’ in 2013, with a plan to invest INR135-153 billion in R&D and the construction of EV infrastructure to achieve 6-7million sales of EV by 2020. As of February 2023, the Government of India aims to convert 70% of commercial vehicles, 30% of private cars, 40% of buses and 80% of two and three wheeled vehicles to EV by 2030.
Indonesia	On 22 February 2022, Indonesian President Joko Widodo attended an event in the capital Jakarta to launch the ‘Electric Vehicle Ecosystem Development Collaboration’, a collaboration between state and private companies. The President stated that the aim is to have two million electric vehicles in the country by 2025, followed by exports.
Thailand	The National Electric Vehicle Policy Committee has set a target of 30% Zero-Emission Vehicles (ZEV) production as a proportion of domestic vehicle production by the end of 2030.
Philippines	Former President Duterte signed the Electric Vehicle Industry Development Act (Republic Act No. 11697) on 15 April 2022, which provides the institutional framework for the production and introduction of EV (Vehicles with at least one electric drive for vehicle propulsion) in the Philippines (“Business World”, 26 April 2022). The act aims to promote the EV industry by positioning EV as ‘an appropriate transport mean to reduce dependence on fossil fuels’.
Vietnam	Amid required by Industry for EV promotion policies, the Government has also made a move. The Government decided to reduce or exempt special consumption tax and vehicle registration fees on EV purchases from March 2022.
Malaysia	EV is in the spotlight in Malaysia as the country aims to meet future decarbonization and greenhouse gas reduction targets. In May 2021, the Government announced the ‘Low Carbon Mobility Blueprint 2021-2030’ aiming to promote EV in stages. Furthermore, the 2022 national budget includes tax incentives available to EV-related businesses.
Myanmar	The Myanmar Investment Commission has set out a policy of prioritizing investment in electric vehicles and related businesses.
Cambodia	EV penetration targets set for rapidly expanding markets, 70% for two-wheeled vehicles and 40% for four-wheeled vehicles by 2050.
Laos	The Government of the Lao PRD issued the ‘Government Agreement on Approval of EV Preferences’ on 4 October 2021 (Resolution No.08/2021GOV), setting a target of at least 1% of all automobiles in Laos to be EV by 2025 and over 30% by 2030.
Singapore	The Government intends to phase out petrol-fueled and diesel-fueled vehicles by 2040, while expanding the use of environmentally friendly vehicles such as EV.

Source: Created by Writhe based on various media

2. Benefits and considerations for the introduction of EVs in enterprises

Companies will be able to receive the following benefits with the introduction of EV.

1. Companies can promote that they are active in environmental measures such as decarbonization.
2. The vehicle can be used as a storage battery, enabling early recovery in the event of a disaster.
3. Low energy costs per travelled distance.

On the other hand, it should be noted that there are cost-increasing factors unique to EV.

1. Short range and long time required for energy charge.
2. Battery degradation and fire risk.
3. Contact with the bottom of the vehicle can be fatal damage, and vulnerable to road flooding.

As a countermeasure, it is recommended that only a portion of company-owned vehicles are switched to EV to determine the balance between the benefits and the increased costs. This is because the use of company-owned vehicles varies greatly depending on how they are used (mileage and driving area). It may also be possible to simulate the estimated amount of increased costs by consulting the EV manufacturer or dealer. It is then advisable for each company to consider an EV introduction plan that meet your benefits.

Published By:
 Risk Engineering Department
 Email: TMA_RE@tokiomarineasia.com

[Contact]

Tokio Marine Asia Pte. Ltd.
 20 McCallum Street #13-01
 Tokio Marine Centre Singapore 069046

Disclaimer: The information, suggestions, and recommendations contained herein are for general informational purposes only. This information has been compiled from sources believed to be reliable. No warranty, guarantee, or representation, either expressed or implied, is made as to the correctness or sufficiency of any representation contained herein.

A member of the
 Tokio Marine Group

Writer: Mr. Keiichi Kawakami, Transportation & Mobility Consulting Department Unit I, Tokio Marine dR Co., Ltd.