

Good Practice Factsheet 2018



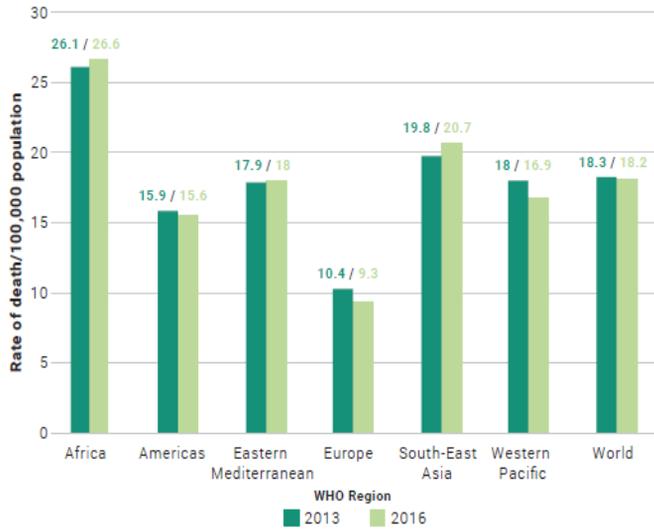
Legislation and enforcement



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Background

Road traffic accidents are responsible for 1.35 million deaths each year around the world.



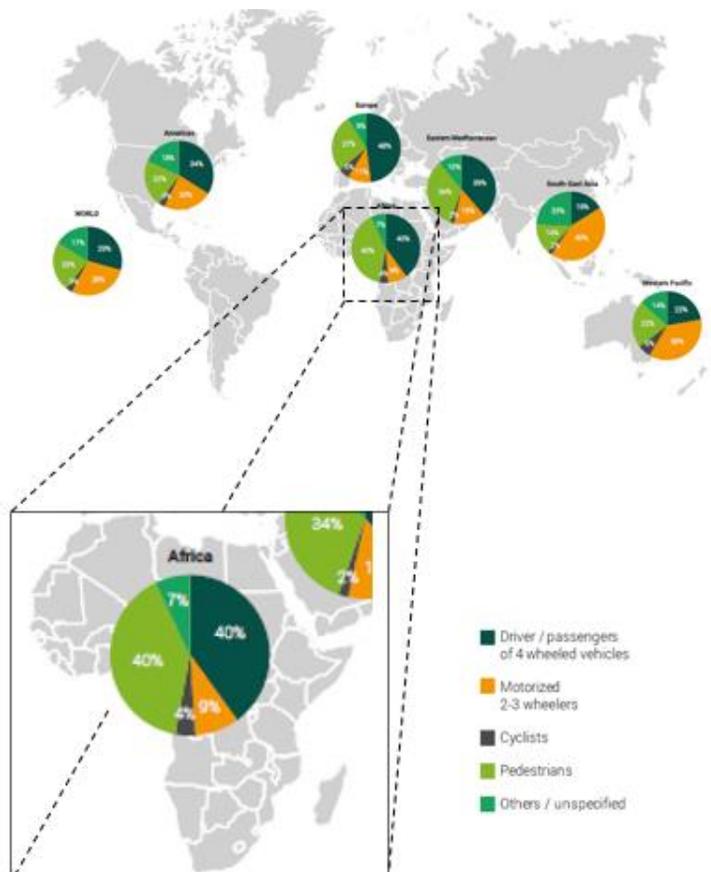
In African countries, the road accident death rate is much higher compared to high-income countries around the world, with an average of 26.6 deaths per 100,000 population.

Half of all road traffic deaths in the African region occur among vulnerable road users (pedestrians, cyclists and motorcyclists).

The proportion of deaths among pedestrians is at 40%, when the average around the world is around 23% (WHO,2018).

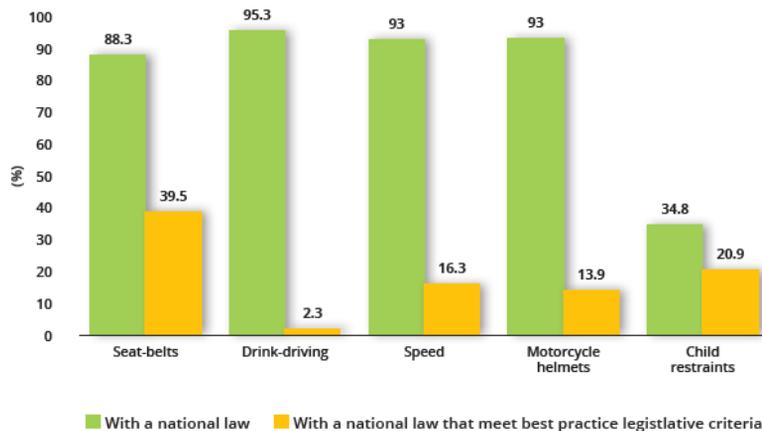
The number of road traffic accidents, injuries and fatalities could be reduced by implementing and enforcing appropriate legislation.

There is strong evidence that road safety laws improve road user behaviour and they can be an effective tool when they are supported by strong and sustained enforcement.



Safer road users

Traffic laws affect all road users and regulate their behaviour. Among others, the regulation of five key behavioural factors (speeding, drink/drug driving, use of seat belts, child restraints and motorcycle helmets) can have a positive impact on reducing crashes, injuries and deaths. Currently, legislation on these factors and their enforcement in Africa fails to meet the criteria for best practice. While comprehensive legislation is required to maintain transport safety, it is not sufficient on its own. For road users to comply with legislation, effective law enforcement and penalties for offenders are required.



Potential Interventions

- **Speeding.** One of the leading causes of trauma is excessive and inappropriate speed. Road users are more vulnerable to injuries when vehicles travel at high speed, with the probability of fatal injury increasing. Speed management is a combination of legislation, physical measures and awareness campaigns with drivers being motivated to maintain the speed limits by speed cameras, educated social pressure, visible law enforcement and severe fines.
- **Alcohol and drug use.** Impaired driving due to consumption of alcohol or drug use increases the risk of a road crash as well as the severity of the injuries that may result from it.
- **Helmet use.** The use of helmets by PTW users influences the severity of crash injuries, with injuries to the head and neck among the main causes of death, severe injury and disability among PTW users. Helmet use can increase by introducing and enforcing relevant legislation and educating drivers. The use of standardised helmets that provide a minimum level of safety is important. The UNECE R22 , MS1-1:2011 (Malaysia) and ECE standard 22.05 are examples of suitable standards for motorcyclist helmets.
- **Seat belt and child restraint use.** The use of seat belts and child restraints does not impact the number of road traffic crashes but influences the severity of injuries for car drivers and passengers. Consistent enforcement of relevant laws by the traffic police is one of the most effective ways of maintaining wearing rates among vehicle occupants.
- **Right of way and red light compliance** by road users can be enforced with random checks and appropriate fines.
- **Compulsory training of drivers and skills testing** before obtaining a licence. Imposing size and engine restrictions for PTW riders until a certain amount of experience is gained.



Safer road users

Impact evidence

The introduction of mandatory helmet law in Vietnam, and its enforcement, led to an increase in use between 2012 and 2015 from 46% to 70%. A study in one of the country's provinces showed that hospitals reported a decrease in road traffic head injuries and deaths of 16% and 18% respectively. The Asia Injury Prevention Foundation (AIP) estimates that since the introduction of the helmet law, around 15,000 lives have been saved.

In Kenya, a combination of law enforcement and campaigning for helmet use led to a reduction of related fatalities by 40% and head injuries by 70%.

The revision of the law to make helmet use mandatory in Italy led to a decrease in traumatic brain injury for motorcycle and moped drivers by 77% (2 admissions per 100,000 population, down from 7).

In Colombia, a similar law managed to reduce the rate of motorcyclist deaths from 9.7 (per 100,000) in 1995 to 2.6 in 2001.

The BAC limit was lowered from 0.15 to 0.05 in Mexico and tougher penalties were introduced to lower the number of deaths and crash rates associated with alcohol. After the law was amended, collisions were reduced by 9.9% and alcohol-related deaths by 5.7%.

Fixed speed cameras and manual methods such as police checkpoints are some of the interventions aimed at reducing speeding. A meta-analysis of 45 evaluation studies on speed undertaken as part of the PEPPER project, found that the overall effect of speed enforcement was a reduction by 18% of accidents. The effect of permanent speed cameras only, was a reduction of 34% in accidents, with the reduction being 11% for manual speed enforcement methods.



In Brazil, speed camera gradually reduced the number of road accident fatalities. During the first year the reduction was 8.6%, with 17.6% and 25.7% for the second and third years respectively.

Similarly, fixed speed cameras in the UK led to a decrease of vehicles over the speed limit by 70% and a reduction of 42% in killed and seriously injured (KSI) casualties at those sites.



Speeding penalties (excluding fines) can be an effective way to reduce speed-related crashes. In Western Australia, the State Government introduced a trial demerit point system for offences relating to speeding, among other driving offences, with demerit points doubled during specific holiday periods. Total speed-related crashes went down by 40% during double demerit periods, fatal crashes were reduced by 52% and injury crashes by 43%.

Increased enforcement led to an increase in seat belt related fines by 15% between 2002 and 2003 in France. The increase in fines and an additional increase in demerit points led to a gradual rise in seat belt use to reach 94% and 98% inside and outside urban areas respectively.

In the same period, the widespread installation of speed cameras on the French main road network reduced the fatality rate by 21%.



In Costa Rica, the introduction of a new law regarding seat belt use, combined with a campaign to build support for the law and inform the public on police enforcement, led to an increase in seat belt use from 24% before the introduction of the law to 82% after its introduction in 2005.

There are examples of successful implementation of a graduated driving licence system (GDLS) for novice drivers, where restrictions are imposed until a rider gains experience. In New Zealand, the introduction of GDLS for car drivers and motorcyclists has proven to contribute to a significant reduction (22%) in PTW crash-related hospitalisation for the 15-19 age group.

Safer roads

One of the most effective ways to improve road safety is to reduce the speed of vehicles. Speed is a key risk factor in vehicle collisions and affects all road users. The creation of safe travel conditions for road users is a combination of various measures such as setting appropriate speed limits, engineering measures, education campaigns and enforcement.

Potential Interventions

- Low speed zones in residential areas; especially near schools, hospitals and in shopping areas. 30km/h zones are common in those areas in Europe, while in home zones the maximum speed is even lower at 10-15km/h. Respecting speed limits is not just a matter of putting appropriate speed signs and implementing physical measures; but also a matter of enforcement, with consistent and highly visible law enforcement operations required.



Impact evidence

In the UK, the Lancashire County Council decided to implement a 30km/h speed limit in all residential areas and outside schools in 2011. As part of a wider programme, it installed signs, issued speed limit orders and worked with communities and schools to change driver attitudes. Police involvement was also used to enforce the speed limit. During the early stages of introducing the speed limit, the number of deaths and serious injuries fell by 4% between 2000 and 2011. During the same period, the proportion of children killed and seriously injured fell by 11%.

In Portugal, several low-cost engineering measures were implemented in a major 170km trunk road in order to improve its safety performance. Accidents in the corridor were mainly related to speed and irregular overtaking, with many head-on collisions and ran-off-road accidents. The engineering measures were complemented by a strong enforcement campaign by the traffic police, monitoring the behaviour of drivers. Due to the combined engineering and enforcement interventions, the annual number of registered fatalities fell from 85 to 52 while the number of KSI victims dropped from 188 to 125. Suspending the strict enforcement measures later led to an increase of 20% in fatalities and 17% in KSI victims.

Safer vehicles

Legislation and regulations regarding vehicle safety standards are required in order to improve the crash-worthiness of vehicles and protect vehicle passengers as well as other road users.

Potential Interventions

- Regulations regarding vehicle safety should be harmonised across different countries. Manufacturers often take advantage of any absence in regulations to remove technological safety features used as standard in other countries.
- Safety standards such as NCAP (New Car Assessment Programme) and the GTR9 safety standard (pedestrian safety standard) need to be introduced. Such standards are usually directed at vehicles, but affect all types of accidents and concern a wide range of road users (drivers and car passengers, PTW riders, pedestrians etc.). Technology safety features can also have a positive effect in the reduction of road accidents.
- Periodic inspection of vehicles. Regular inspection of vehicles should be mandatory and carried out by specialised technicians in approved sites to test the road worthiness and the crash worthiness of vehicles.
- Control of overweight vehicles travelling on roads by introducing relevant legislation and enforcement by traffic police. Overweight vehicles are responsible for the degradation of roads and a serious threat to road safety, due to their reduced operating capabilities.

Impact evidence

It is estimated that each point in NCAP score relates to a relative reduction in probability of 2.5% for fatalities, and 1% for serious injuries.

The ETSC (European Transport Safety Council) estimates that approximately 20% of pedestrian casualties could be reduced on urban roads by using Intelligent Speed Assist (ISA).

The introduction of mandatory vehicle inspection in Turkey in 2009 is estimated to have affected the number of total accidents (12.4% reduction) and the number of fatalities (8.9% reduction) when comparing data between 2007 and 2011.



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