

CHILD AND ADOLESCENT ROAD SAFETY

in East Asia and Pacific nations



CHILD AND ADOLESCENT ROAD SAFETY

in East Asia and Pacific nations



Contents

Acknowledgements	v
Abbreviations and acronyms	vi
1. Introduction	1
2. Why road traffic collisions need to be addressed	3
3. What puts children and adolescents more at risk?	6
3.1 Non-modifiable risk factors	6
3.2 Modifiable risk factors	8
4. What are good practices?	9
4.1 Safe Systems Approach	10
4.2 Evidence-based child specific strategies	10
4.3 Cost-effective interventions	10
4.4 Available evidence on child- and adolescent-specific road safety strategies	11
4.4.1 Safe road users	12
4.4.2 Safe roads	14
4.4.3 Safe speeds	14
4.4.4 Safe vehicles	15
4.4.5 Post-crash response	16
5. What should be done?	17
5.1 Assess the situation	18
5.2 Identify stakeholders	19
5.3 Identify potential interventions for the region	21
5.4 Collaborative implementation	24
5.5 Monitor and evaluate	26
6. Child and adolescent road traffic situation in East Asia and the Pacific nations	28
6.1 The burden of child road traffic deaths and injuries in East Asia and Pacific nations	31
6.2 The cost of road traffic injuries and deaths	37
References	39
Country profiles	43
Cambodia	44
China	45
Cook Islands	46
Democratic People's Republic of Korea	47
Fiji	48
Indonesia	49
Kiribati	50
Lao People's Democratic Republic	51
Malaysia	52
Marshall Islands	53
Micronesia (Federated States of)	54
Mongolia	55
Myanmar	56
Nauru	57
Niue	58
Palau	59
Papua New Guinea	60
Philippines	61
Samoa	62
Solomon Islands	63
Thailand	64
Timor-Leste	65
Tokelau	66
Tonga	67
Tuvalu	68
Vanuatu	69
Viet Nam	70
Appendix: Sources of data for country profiles	71

List of figures, tables and case studies

Figures

Figure 1:	Modifiable and non-modifiable risk factors for road traffic injuries among children and adolescents	7
Figure 2:	The Safe Systems Approach to road safety	11
Figure 3:	Road safety implementation cycle	18
Figure 4:	Stakeholder analysis for child road safety prevention	19
Figure 5:	Causes of injury-related death among children and adolescents <20 years of age in East Asia and Pacific nations, 2019	30
Figure 6:	Road traffic death rates per 100,000 children and adolescents in East Asia and Pacific nations, 2019	32
Figure 7:	Road traffic death rates for children and adolescents per 100,000 population, <20 years of age, both sexes, in East Asia and the Pacific nations, 2019	32
Figure 8:	Cause of death by road user group for children and adolescents <20 years of age, both sexes, in East Asia and Pacific nations, 2019	33
Figure 9:	Road user deaths in East Asia nations for children and adolescents <20 years of age, both sexes, 2019	34
Figure 10:	Proportion of years lived with a disability (YLD) by road user group for children and adolescents <20 years of age, both sexes, in East Asia and Pacific nations, 2019	37

Tables

Table 1a:	Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe road users	12
Table 1b:	Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe roads	14
Table 1c:	Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe speeds	14
Table 1d:	Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe vehicles	15
Table 1e:	Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Post-crash response	16
Table 2:	Overall causes of death for all children and adolescents <20 years of age in East Asia and Pacific nations, 2019	29
Table 3:	Leading causes of child and adolescent death in East Asia and the Pacific nations, 2019	31
Table 4:	Road user deaths for children and adolescents <20 years of age, both sexes, in Pacific islands, 2019	35
Table 5:	Years lived with a disability (YLD), years of life lost (YLL) due to premature mortality and disability-adjusted life years (DALYs) as a result of road traffic collisions among children and adolescents <20 years of age, both sexes, in East Asia and Pacific nations, 2019	36
Table 6:	The cost of serious and fatal road traffic collisions (all ages), and per cent of GDP in East Asia and Pacific nations	38

Case studies

Case study 1:	Safekids child restraint programme in China	22
Case study 2:	Raising awareness among children and adolescence in Cambodia	23
Case study 3:	A partnership approach to getting helmets on children's heads and slowing down in Viet Nam	25
Case study 4:	Understanding child injuries in Fiji	27

Acknowledgements

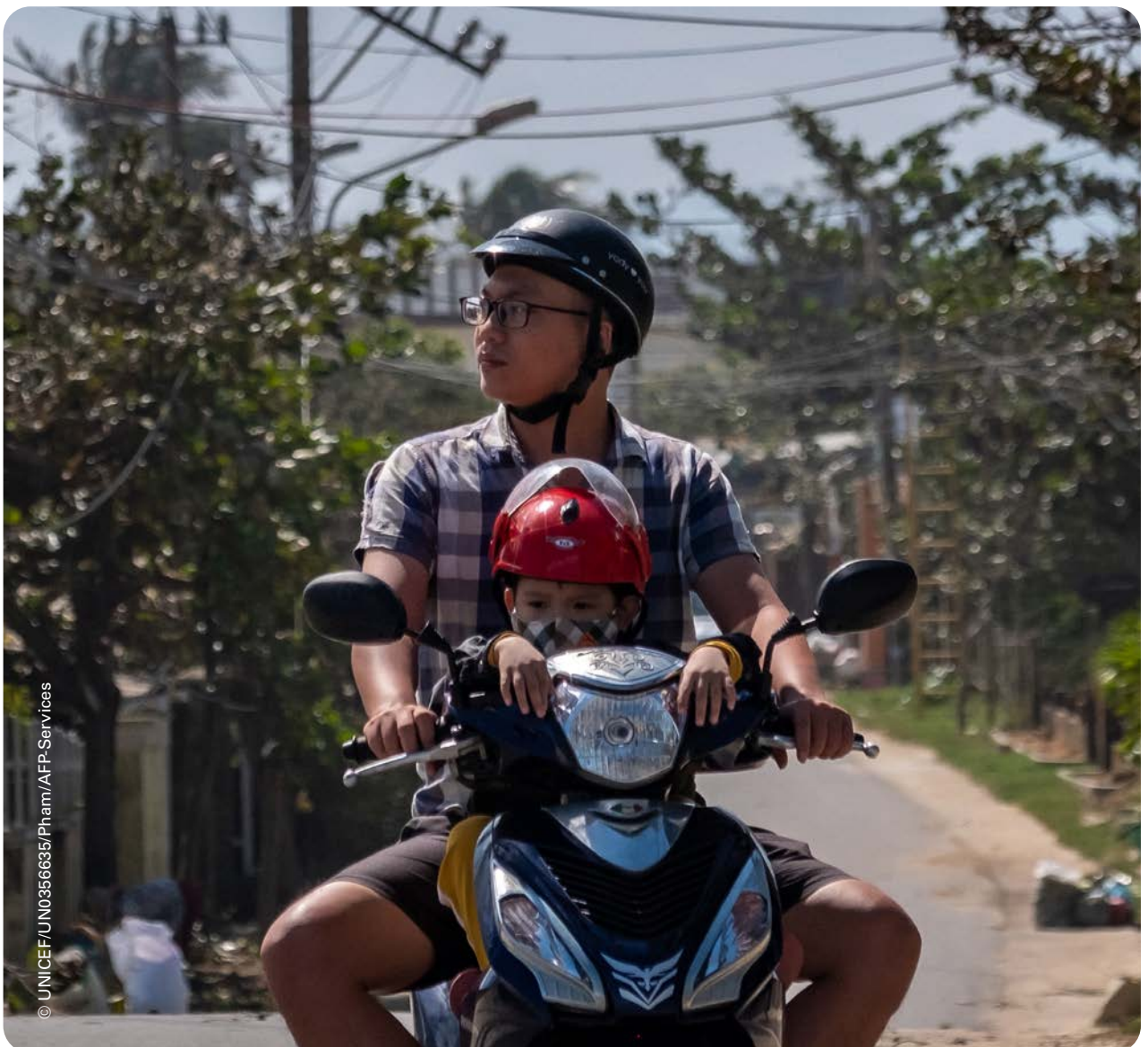
This child and adolescent road safety report is a product of the UNICEF East Asian and Pacific Regional Office. The report was researched and prepared by Margie Peden, Jane Elkington and Pratihtha Singh of The George Institute for Global Health.

This guidance was developed under the overall direction of Basil Rodrigues and Salwa AlEryani, UNICEF East Asian Pacific Regional Office, and Joanne Vincenten, UNICEF Headquarters.

Country case studies were reviewed by UNICEF country offices: Hedy Ip and Path Heang (Cambodia), Sun Hui and Xiaona Huang (China), Yuki Suehiro (Fiji), and Maharajan Muthu and Nguyen Huy Du (Viet Nam).

We gratefully acknowledge the support provided by Michelin in the development of this report.

Design: QUO Bangkok



© UNICEF/UN0356635/Pham/AFP-Service

Abbreviations and acronyms

DALY	disability-adjusted life years
GBD	Global Burden of Disease
GDP	gross domestic product
GNI	gross national income
LMIC	lower-middle-income country
RTI	road traffic injury
SDGs	Sustainable Development Goals
UN	United Nations
UNICEF	United Nations Children's Fund
WHO	World Health Organization
YLD	years lived with a disability
YLL	years of life lost



© M. Peden/TGI-UJK

1. Introduction

The 2018 Global Status Report on Road Safety called for a 'shift in the current child health agenda, which has largely neglected road safety' (1). The call for this shift is not new, having been a central theme of the 2008 'World report on child injury prevention' (2), but the burden of road trauma on the lives of children and their families continues to be huge. Road traffic injuries are the leading single cause of death to children and young people worldwide (3).

A road traffic injury is defined as a fatal or non-fatal injury due to a road traffic crash, collision or incident resulting in an injury, occurring on a public road and involving at least one moving vehicle (4). Road traffic injuries may occur to any road user including pedestrians, pedal cyclists or passengers or drivers of a motorized vehicle.



The recently released UNICEF report, [Technical Guidance: Child and Adolescent Road Safety \(2022\)](#), addresses the road safety risks and intervention strategies for children and young people under the age of 20 years (5). It notes that road traffic deaths and disabilities to children are particularly devastating to the impacted families, and costly to communities because of the vulnerability of children, and the years of healthy life lost in the face of the known preventability of these injuries. The report highlights that low-income and lower-middle income countries experience 78 per cent of the child road traffic injuries. High-income countries, having well-implemented and continually improving child road safety measures, experience only 3 per cent of the global burden of road traffic injuries to this age group. The guidance package is an important adjunct resource to this report, providing summaries of what is known about effective areas for action under the Safe Systems framework as it pertains to child and adolescent road injuries.

This report is intended to provide relevant information about the burden, risk factors and interventions to address road traffic injuries among children and adolescents in the region. The target audience includes UNICEF staff in country and regional offices, country-level road safety and public health practitioners, policy makers, advocates and academics.



© J.A. Vincenten/UNICEF, HQ

2. Why road traffic collisions need to be addressed

As the world struggles to address multiple global health issues, it is possible to overlook the causes of death and disability that might be considered endemic. Road traffic injuries (RTIs) have been the leading cause of death of children over the age of one for many decades, but we are now equipped with ample evidence to reduce this preventable cause of death and disability.

Prioritizing child and adolescent road safety recognizes:

- **Children have the right to a safe environment.** UNICEF’s Strategic Plan, 2022–2025 reflects its commitment to upholding the United Nations (UN) Convention on the Rights of the Child, which specifies the fundamental right of children to a safe environment, free from injury and violence (6). It also states that children have the right to the highest attainable level of health and that it is a responsibility of society to protect children and provide them with appropriate support and services (7).

2. Why road traffic collisions need to be addressed

- **Children are especially vulnerable to road traffic injuries.** Because of their stage of cognitive development, physical size, and the vulnerabilities of their smaller and growing bodies, children are particularly vulnerable to being injured. Traffic hazards to children and adolescents stem from vehicles and road environments designed by adults for adults. Child pedestrians are less likely than adults to be seen from the driver's seat; younger children, particularly, are less likely to be fully aware of the dangers or be able to judge the speed and distance of an approaching vehicle; as pedal cyclists and novice drivers or riders, their skills are less developed; and particularly as adolescents, they may engage in risk-taking as part of their path to independence (8). For all these reasons, [WHO's Ten Strategies to Keep Children Safe on the Road](#) encourage adults as road users, vehicle designers and road and urban planners, to fully and continually consider the vulnerabilities of children to road traffic injuries.
- **There are huge unmet social and economic benefits to countries that are currently over-represented in these tragic statistics.** A recent Lancet Commission on adolescent health (9) argues that a focus of health and well-being planning that includes adolescents will assist in reducing economic gaps between low- and high-income countries. Road traffic injuries place enormous barriers for impacted young people (and often their family, due to caring responsibilities and other emotional costs) on opportunities for education, employment, housing and social engagement. Because of their typically robust health status, adolescents have often been overlooked in health planning, however, prioritizing adolescent road safety recognizes the importance of enabling young people to optimally meet the future challenges of employment, parenthood, and financial independence (9).
- **There is value in adopting a life-course approach to health.** UNICEF takes a life-course approach to adolescent development and participation, identifying critical risks and opportunities that have implications for the realization of children's rights, from the first decade through second. The importance of adolescent health to life-course is also the impetus behind the 2019 WHO manual, [Accelerated Action for the Health of Adolescents \(AA-HA!\)](#) (10). This manual provides worked examples of investments in adolescent health, by way of multi-sectoral national strategies, that provide immediate health and socio-economic benefits for adolescents, as well as for their future adult lives. Module 9 of this manual sets out interventions to prevent and mitigate road traffic injuries among adolescents.
- **Road trauma prevention addresses the UN Sustainable Development Goals (SDGs).** The 17 SDGs, released in 2015 and adopted by all UN member states, include two important directives on road safety:
 - by 2030, halve the number of global deaths and injuries from road traffic accidents (SDG target 3.6), and
 - by 2030, provide safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons (SDG target 11.2).

[UNICEF's Strategic Plan, 2022–2025](#) (6), provides a global framework for the attainment of the SDGs for children.

Global attention and resources for regional action on child and adolescent road safety

Global Plan: Decade of Action for Road Safety 2021–2030. Action on the SDGs has been highlighted within the UN’s sentinel global road safety document, within an urgent call for action by all countries in a global partnership (3). Strategies such as reducing the number of vehicles on the road, the speed of vehicles, and urban planning to address equity while encouraging physical activity will ensure a reduction in road trauma while simultaneously addressing poverty and achieving greater environmental sustainability (11).

UNICEF Technical Guidance for road safety. Provides an overview of the burden and impact of child and adolescent road traffic injuries and fatalities and explains the risk factors involved. Section 4 of this document provides further details on strategies that work, or are promising, or those that do not. Combining this information with the suggested steps to implementing good practice (Section 5) and tools and resources (Section 6) provides local planners with a useful resource for action (5).

WHO’s SaveLIVES package of road safety interventions is a valuable resource for all-ages road safety strategic planning (12). SaveLIVES provides an evidence-based inventory of priority interventions to be implemented towards achieving the SDG targets. Strategies and approaches that apply specifically to children are located on pages 42-43.

Our future: A Lancet commission on adolescent health and wellbeing is the result of a Lancet global collaborative effort to highlight the importance of addressing adolescent health in the current global climate. It highlights the need for, and strategies on how to adopt, collaborative and multi-pronged strategies that take a life-course approach to health (9).

WHO’s AA-HA! guide for governments to develop national health strategies and plans for adolescents identifies road traffic injuries as an important issue to address (10). Developed with input from young people and global partners in health, the document provides direction for governments on how to evaluate their country’s adolescent health needs before developing their adolescent health programmes, strategies and plans. It outlines how workshops with intersectoral representation can be managed to meet each country’s own needs in the process of developing a national strategy. Case studies, tools and resources, alongside suggested steps to undertake, make this a useful resource in strategic planning.

Technical Working Group on Adolescent Health and Well-being. The United Nations and many global partners (including UNICEF, UNESCO, World Bank and WHO) have formed a technical working group to advance the adolescent well-being framework in policies and programmes at country and regional levels. There are major opportunities to increase recognition of road safety as an important component of adolescent health and well-being at the [Global Forum for Adolescents](#) in 2023.



3. What puts children and adolescents more at risk?

Children and adolescents are more vulnerable to road traffic injuries than adults for a range of reasons. These reasons, or risk factors, can be classified as being non-modifiable or modifiable. In addition, there are post-crash factors that place children at elevated risk of preventable serious injury or death in the event of being involved in road traffic crash.

3.1 Non-modifiable risk factors

These include a child's age, sex, size, gender, developmental stage in terms of limitations in their cognition and attention, as well as limitations of their vision and hearing (13). A child's smaller size, for example, means children on or near roads are less likely to be seen by other road users. Their reduced levels of concentration or cognitive capacity to judge speed and distance, combined with greater impulsivity, means they may be more likely to be in the path of other road users with little warning (13). These non-modifiable risk factors mean that adopting a Safe Systems approach is essential to keep children safe on the road, knowing that road use errors are to be expected with this age group.

Figure 1: Modifiable and non-modifiable risk factors for road traffic injuries among children and adolescents

NON-MODIFIABLE RISK FACTORS			MODIFIABLE RISK FACTORS		
Age	Sex	Size	Risk taking	Lack experience	Peer pressure
Young children do not use the road nor react to traffic situations in the same way as adults.	As children get older, more boys are involved in road traffic collisions than girls.	A child is difficult to see in traffic because of their stature. Likewise, they have difficulty seeing above the surrounding vehicles and infrastructure.	As they get older, adolescents begin to take more risks or seek out new experiences, for example alcohol and substance use. This is more common among boys than girls.	Inexperience, particularly among novice drivers, increases the risk of a crash occurring.	Peers are the most important people in the lives of teenagers. They are often led by what is considered 'cool', not necessarily what is safe.
Cognition	Development		No safety equipment	Poor infrastructure	Unsafe vehicles
Young children find road traffic situations extremely complex to navigate.	Their developmental immaturity and inability to assess risks places children at higher risk of road traffic crashes. Their concentration span is also much shorter and they have difficulty focusing on more than one issue at a time.		Not wearing helmets or using child restraints or seatbelts places children at greater risk of injuries in the event of a collision.	Lack of separate lanes for walking and cycling results in vulnerable children mingling with heavy vehicles.	Vehicles without safety features such as seatbelts, ISOFIX or pedestrian crumple zones place children and adolescents at greater risk of sustaining injuries in the event of a crash.
Hearing and seeing			Lack of knowledge	Inadequate post-crash response	
Young children have difficulty discerning what direction a sound is coming from. Likewise, they have difficulty judging distances between themselves and other vehicles when both are in motion.			All children need to be taught the basic laws and rules of the road, how to behave in traffic and what risks to avoid.	Countries that do not have the appropriate pre-hospital, hospital and rehabilitative facilities designed for children place them at greater risk of negative outcomes.	

3.2 Modifiable risk factors

These include risk taking, peer influence, and inexperience in road user skills whether they be young children safely crossing the road or learning to ride a bicycle, or adolescents and young adults as learner riders or drivers (13). Such risk factors can be modified through evidence-based interventions that increase knowledge, skills and awareness of consequences. Behaviours such as the non-use of restraints and helmets, speeding and distracted driving (for teenagers) place young people at elevated risk of road trauma. Environmental risk factors include poor infrastructure (such as the absence of sidewalks, or safe areas to cross the road) or tolerance of unsafe speeds of vehicles around schools and other areas frequented by children and adolescents. Vehicle-related risk factors specific to children include lack of ISOFIX for child restraints, motor vehicle bumper bars made of unforgiving materials, or limited rear vision on motor vehicles for seeing smaller objects. Such risk factors can be modified through a combination of education, laws and their enforcement, building of safer road infrastructure and making safer vehicles more readily available (5).

Post-crash response risk factors for serious injury outcomes include a lack of child-friendly equipment within emergency vehicles and hospitals, suitably trained personnel to manage the unique biological and emotional vulnerabilities of injured children.



© UNICEF/UN0226358/KHOY



© UNICEF/UN0222162/Brown

4. What are good practices?

It is recommended that strategic planning for child and adolescent road safety follow three principles of good practice: Adopt a Safe Systems approach, employ evidence-based child-specific strategies (alongside evidence-based all ages strategies), and include cost-effective interventions where possible. These principles are outlined below – and further details can be found in the documents listed in the box entitled Global attention and resources for regional action on child and adolescent road safety.

4.1 Safe Systems Approach

Early road safety efforts focused on influencing road user behaviour, however as the reductions in road trauma began levelling out, it was recognized that people will continue to make errors and remain vulnerable to the hazards in the road environment (14). Within the last two decades there has been a shift adopted around the world to a more holistic approach, the Safe Systems approach, (15) with greater safety outcomes for many countries (16). This approach recognizes that road users make errors that lead to crashes, collisions or incidents resulting in an injury (Figure 2). By addressing the system within which the road user operates, it serves to provide an environment that is more 'forgiving' of these errors and the vulnerabilities of the human body. The pillars of the Safe Systems approach are the provision of: safe roads; safe vehicles; safe speeds; safe road users; road safety management; and effective post-crash care. (16) The adoption of a Safe Systems approach holds the potential of being able to eliminate serious crashes (if the system can be truly safe) and the adoption by some countries, beginning with Sweden, of 'Vision Zero'. This ambitious target, no fatal or serious road injuries, rests on adequate commitment, funding and design of all the components of the Safe System (15).

4.2 Evidence-based child specific strategies

The UNICEF Technical Guidance for Child and Adolescent Road Safety, The WHO/UNICEF World Report on Child Injury Prevention (2), the WHO/World Bank World Report on Road Traffic Injury Prevention (4) and the WHO report, Ten Strategies for Keeping Children Safe on the Road (8) identify effective strategies for reducing road trauma to all age groups and specific strategies targeting children and young people. These reports identify evidence-based strategies that have been particularly effective in reducing child road trauma, including: child restraint systems for the safety of child passengers in motor vehicles; helmets for child pedal cyclists as well as child passengers and operators of motorized two- and three-wheeled vehicles; graduated drivers' licensing programmes requiring additional limits on speed, passengers, and blood alcohol levels for newly licensed drivers, and reduced speed limits around schools, and child play areas.

4.3 Cost-effective interventions

The economic returns from road safety interventions for children and adolescents are particularly important for lower-middle-income countries (LMICs). Investment in road safety will not only enable adolescents full life potential in resource-poor settings, but will also generate high economic and social returns, including reduced costs such as health care services and loss of employment by parents needing to take-on carer roles (17, 18). However, there are huge gaps in cost-effectiveness research in road trauma countermeasures in LMICs, particularly in child road safety interventions. The Lancet, however, published one robust study that projected the economic and social benefits of the avoidance of deaths and serious injury caused by road traffic crashes to young people. Implementing a combination of seven known effective interventions was projected to be highly cost effective across the 75 LMICs included, with benefit cost ratio of 5:9 (19).

4.4 Available evidence on child- and adolescent-specific road safety strategies

Using the Safe Systems framework, the table below provides a summary of strategies assessed for their effectiveness in reducing road trauma to children and young people. It is important to note that these strategies, while mostly evaluated separately, are optimally used in combination with each other as well alongside the strategies, for which there is ample strong evidence, that are effective in reducing road traffic injuries for all ages.

Figure 2: The Safe Systems Approach to road safety



4.4.1 Safe road users

Most good practices fall into this “pillar” of road safety, with laws and the enforcement of laws being the most effective. Awareness raising and education tend to be the glue that binds all behavioural and other interventions together. Standalone education programmes, particularly those without any practical components, have not been found to reduce road traffic injuries or deaths although they may change knowledge and/or attitudes, but these are usually short term.

Table 1a: Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe road users

	Effective	Promising	Insufficient evidence	Ineffective or harmful	Reference(s)
Child restraints					
Setting laws that require age-appropriate restraints for children travelling in motor vehicles	X				(20-23)
Requiring children to sit in the rear passenger seats	X				(24-26)
Promoting the use of appropriate child restraints for infants and children	X				(27-29)
Increasing accessibility to child restraints, including cost subsidization or borrowing schemes		X			(30, 31)
Bicycle helmets					
Promoting bicycle helmet use through community campaigns, subsidization or give-away programmes		X			(32)
Motorcycle helmets					
Setting laws that mandate helmets for ALL riders of 2- and 3-wheelers on all roads and all engine sizes	X				(33-35)
Graduated drivers licensing systems					
Supervising driving practice (many hours) for novice drivers	X				(36, 37)
Setting laws that restrict maximum speeds, night-time passenger numbers and require zero blood alcohol limits on novice and newly licensed drivers	X				(13, 38, 39)

	Effective	Promising	Insufficient evidence	Ineffective or harmful	Reference(s)
Mobile phone laws					
Setting laws that restrict the use of mobile phones by novice drivers			X		(40-42)
Post-license driver and rider education					
Providing advanced driving or riding skills for young drivers				X	(43)
Awareness and skills					
Providing practical road safety education to children from about 4-5 years of age, and throughout primary and secondary school, using parent and peer training.		X			(44)
Promoting safe road user behaviour to adolescents through short education programmes (particularly with booster sessions)			X		(27)
Running campaigns directed at adolescents regarding alcohol awareness and limiting availability; designated driver and planning getting home from social events.			X		(45)
Educating cyclists, riders and passengers on 2- and 3-wheelers about the need to wear helmets and white/light-coloured clothing.			X		(35, 46)
Promoting white or light-coloured clothing for visibility; reflective strips on clothing or articles like backpacks; walking in good lighting; and walking facing oncoming traffic to reduce injury		X			(47)

4.4.2 Safe roads

Improving road infrastructure through the provision of sidewalks, safe crossings, traffic calming measures, speed bumps, etc. should be a priority for protecting children on their journeys to and from school. The environment around schools should be optimized to prioritize walking and cycling as part of both road safety and child health policies. In particular, the infrastructure should encourage slower speed zones around schools.

As roads are designed and built, they should take into consideration the needs and constraints that children and adolescents face in traffic. [Designing streets for kids](#) is a useful resource which highlights the strategies, programmes, and policies that cities around the world have used to design spaces that enable children of all ages and abilities to utilize cities' streets (48). The guide makes design recommendations and highlights case studies that encourage streets to be safe, enjoyable, and inspirational for children and their caregivers.

Table 1b: Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe roads

	Effective	Promising	Insufficient evidence	Ineffective or harmful	Reference(s)
Separating traffic					
Separating pedestrians and cyclists – sidewalks and cycle lanes	X				(12)
Traffic calming to reduce speeds					
Installing safe pedestrian crossings, chicanes, speed humps, tactical urbanism and other environmental design features	X				(12, 21)

4.4.3 Safe speeds

Low-speed zones around schools have proved effective in protecting children and reducing road traffic injury in both high- and low-income settings (49, 50). Speed reduction can involve changes in road design as well as enforcing reduced speed limits to enable child pedestrians, cyclists and motorcyclists to travel to and from school safely.

Table 1c: Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe speeds

	Effective	Promising	Insufficient evidence	Ineffective or harmful	Reference(s)
Setting and enforcing a maximum speed limit of 30 km/hr on roads with high concentrations of pedestrians, e.g., schools	X				(49, 50)

4.4.4 Safe vehicles

The UN minimum safety regulations should be applied to all new vehicles in order to improve vehicle safety for child passengers. These include measures such as ISOFIX child restraint anchorage points. In addition, New Car Assessment Programs at a country or regional level can promote consumer awareness and demand for higher standards of safety for all car occupants including children.

Table 1d: Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Safe vehicles

	Effective	Promising	Insufficient evidence	Ineffective or harmful	Reference(s)
Airbags					
Prohibiting children (under 12) from sitting where they may be in the path of airbag deployment				X	(25)
Child restraint anchorage points					
Encouraging new vehicle designs to incorporate measures such as ISOFIX child restraint anchorage points	X				
Promoting consumer awareness and demand for higher standards of safety for all car occupants including children through New Car Assessment Program		X			(12)
Vehicle design for pedestrian safety					
Designing vehicle fronts to minimize injuries to pedestrians		X			(51)

4.4.5 Post-crash response

Primary prevention is the best approach to reducing child road traffic injuries, disabilities and deaths. However, there will still be children who require attention following a crash. Children are not “little adults” – their physiology is different and so what may be normal for an adult may not apply for a child. Therefore, all points of post-crash trauma should have child-specific elements, including equipment, and training that includes managing the physical and emotional state of children who have been injured in a crash.

In addition, rigorous monitoring and evaluation of cases and interventions should be put in place.

Table 1e: Evidence-based strategies that specifically reduce serious and fatal injuries to children and adolescents: Post-crash response

	Effective	Promising	Insufficient evidence	Ineffective or harmful	Reference(s)
Paediatric-specific trauma response and rehabilitation services					
Promoting first-aid skills among potential first responders in the community including teachers, police, fire-fighters, professional drivers, school transport drivers, as well as children	X				(12)
Equipping emergency vehicles with equipment designed for use on children	X				(45)
Training personnel on the different responses of children to trauma	X				(45)
Providing child-focused hospital trauma care services		X			(13)
Child-specific data systems					
Monitoring child road traffic injuries and deaths that enables the identification of high-risk traffic areas and road user groups	X				(12, 52)
Evaluating the impact of interventions through both quantitative and qualitative data collection methods	X				(52)

Note: Details of these interventions, in the tables above, can be found in [UNICEF Technical Guide for road safety, Ten strategies to keep kids safe in traffic \(8\)](#) and the WHO Save LIVES package (12).



© J.A. Vincenten/UNICEF/HQ

5. What should be done?

In order to reduce road traffic injuries and deaths among children in the nations of East Asia the Pacific, road safety decision-makers and practitioners should agree a strategic approach that will optimize lives saved while simultaneously addressing practical considerations, costs and local policy and planning contexts. Therefore, countries should:

- Assess the current situation – where the country is now regarding child road traffic injuries and deaths;
- Establish where the country wants to be in five or ten years' time through the formulation of an achievable goal with specific objectives and indicators;
- Assess the funding situation – what funding pays for what – and how any modifications can be sustainable;
- Determine who should be involved; and
- Determine how success will be measured.

A successful child road safety programme would involve biofeedback, as shown in Figure 3, which involves all key stakeholders.

Figure 3: Road safety implementation cycle



5.1 Assess the situation

Before undertaking any activities to reduce road traffic collisions and injuries among children a full assessment of the situation as well as capacity should be undertaken. There are multiple tools that can be used to assess the situation including:

- The [SaveLIVES](#) assessment tool, see Table A1 on pages 52-56;
- The [World Bank's](#) assessment tools; and
- The [EASST school zone](#) assessment report template, see page 34.

Unfortunately, few of these tools are tailored to assess the situation and programmes that address the specific needs of children and adolescents.

One assessment tool, has however, been designed to assess the infrastructure around schools where most children spend up to 8 hours of their lives each day. This assessment tool, called the [Star Rating for School](#) app is an evidence-based tool for measuring, managing and communicating the risk children are exposed to on a journey to and from school. It supports quick interventions that save lives and prevent serious injuries from day one. The app can be used to:

- Measure the safety of roads around schools before and after infrastructure improvements;
- Provide an evidence-based rating of road safety – ratings range from 1 to 5 stars where 1-star is the least safe and 5-star is the safest.
- Support education campaigns for students, drivers and the wider community for safe travel around schools; and
- Guide decision-makers in prioritizing road upgrades around schools by assessing different options.

How to combine school safety assessments with other assessment tools that are synchronized with planning cycles to ensure recommendations are incorporated into school improvements should be further explored.

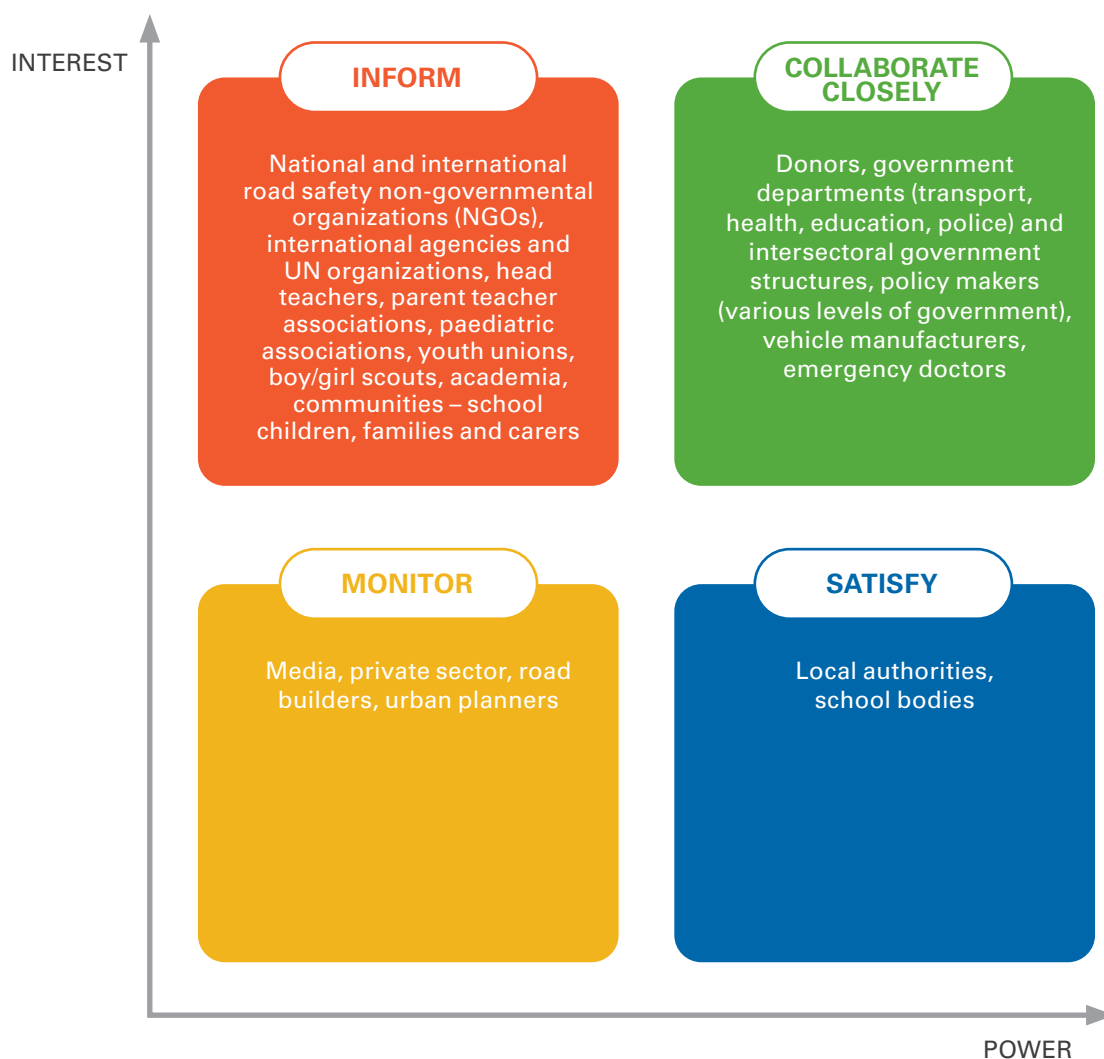
5.2 Identify stakeholders

Stakeholder analysis is an important step to undertake as it will identify supporters and detractors and ensure that the project will be sustainable in the long term. There are various methods for conducting stakeholder analyses – from simple two-by-two tables based on partners interest and power (55), more [complex political mapping](#) through to a full Political, Economic, Social, Technological, Environmental and Legal (PESTEL) analysis, which is a strategic framework used to assess these factors around an issue.

A simple stakeholder analysis for a school road safety project might look something like the two-by-two table below (Figure 4).

The primary focus of any road safety collaboration should be on supporting the government to adopt good laws and policies and to integrate safety-related interventions into programmes that ensure sustainability.

Figure 4: Stakeholder analysis for child road safety prevention



5. What should be done?



Engaging with the community is key to developing and implementing road safety interventions. UNICEF has excellent guidelines on how this should best be undertaken through a set of [Minimum Quality Standards and Indicators in Community Engagement](#).

[UNICEF's child friendly school model](#) is an excellent example of a partnership approach to improving access to quality education for every boy and girl. It promotes inclusiveness, gender-sensitivity, tolerance, dignity and personal empowerment. It is based on the following principles:

- Schools should operate in the best interests of the child.
- Educational environments must be safe, healthy and protective.
- Classrooms should have trained teachers and adequate resources.
- Children's rights must be protected, and children's voices heard.

5.3 Identify potential interventions for the region

Once an assessment of the current burden, causes of road traffic collisions, and outcomes has been conducted, a collaborative process of identifying and agreeing interventions should take place. It is essential that decisions on “what to do” are grounded in evidence.

For the nations of East Asia and the Pacific region interventions could, for example, focus on the following target groups:

- Vulnerable road users – pedestrians, cyclists and motorcyclists;
- Passengers in those countries which are rapidly motorizing;
- School-age children and adolescents and their caregivers;
- Boys.

And implementing the following TEN simple interventions:

1. Controlling speed around schools;
2. Setting and enforcing child restraint laws;
3. Putting in place child restraint fitting stations and associated parent education training;
4. Mandating the use of helmets for all cyclists;
5. Improving visibility for pedestrians, e.g., through reflective backpacks, visibility strips, etc.;
6. Improving the infrastructure around schools through low cost engineering measures, e.g., zebra crossings, lighting, paved sidewalks, etc.;
7. Ensuring all vehicles are manufactured, assembled or imported with the eight recommended UN safety regulations;
8. Supervising children on their walks to school;
9. Providing road safety education and practice for all school children; and
10. Ensuring there are adequate child-friendly emergency response and services.

CASE STUDY 1

SafeKids child restraint programme in China

SafeKids Worldwide China is a not-for-profit organization working to keep children, their families and communities safe from injury. They collaborate with government agencies such as China-CDC and the education bureau, international agencies including WHO and UNICEF as well as academic institutions and the private sector.

Shanghai passed a “Regulations on Road Traffic Administration of Shanghai Municipality” law on 25 March 2017 which requires all children under the age of 4 years to be securely strapped in an appropriate child restraint system and prohibiting all children under the age of 12 years from sitting in the front seat. In order to educate parents and children, SafeKids China implemented child restraint fitting stations and trained several Child Passenger Safety Technicians (based on the [US model](#)). Through explanation and demonstration of different types of car seats the Child Passenger Safety Technicians teach both parents and children the importance of being in a restraint system when travelling in a car. They also distribute leaflets explaining the different types of child-safety seats in more detail and why they should be used.

According to [SafeKids China](#), child restraint usage in Shanghai increased from 33 per cent in 2017 to 63 per cent in 2021. Based on experiences in various provinces and cities such as Shanghai, China has put child restraints into a national law – the Law on Protection of Minors – which was implemented in 2021. In the updated law, it clearly mentions that parents should use appropriate child restraint systems for their children in order to prevent injuries in the case of a road traffic collision.



© SafeKids China

CASE STUDY 2

Raising awareness among children and adolescence in Cambodia

Approximately 517 children lose their lives in Cambodia every year as a result of a road traffic collision – 44 per cent of whom are motorcyclists or cyclists (53). It was, therefore, not unexpected that on 9 January 2015 a [new Road Traffic law](#) was officially promulgated mandating that all motorcycle **passengers** – including children – wear helmets.

Since that time, several approaches have been used in the country to raise awareness about the law and the reasons why children should wear helmets. [The Asia Injury Prevention Foundation](#) in Cambodia together with national and international partners put in place a multi-faceted helmet programme which included:

- [Helmets for Kids](#), which distributed helmets and provided road safety education to children at school;
- Raising awareness by engaging the media through a programme called [Agents for Change](#) and hard-hitting [television adverts](#);
- Encouraging safer behaviours particularly among factory workers and drivers;
- Promoting general road safety and accountability; and
- Collaborating with a multi-sectoral group of stakeholders who have the interest and power to advocate for policy changes, which would improve road safety nationwide.

An evaluation of the Helmets for Kids programme (56) conducted between nine schools receiving the intervention (a total of 6,721 students) and four control schools (a total of 3,031 students) found that the school-based programme which combined the provision of helmets with class-based road safety education increases helmet use among children.

A more general road safety education programme for older children, which was conducted among a small number of 10 and 11-year-olds, using an ADDIE (Analysis, Design, Development, Implementation and Evaluation) instructional design model to advance knowledge, attitudes and safe practices demonstrated a small positive effect suggesting that such a model might be useful among elementary students across Cambodia (57).



5.4 Collaborative implementation

An implementation plan should be developed collaboratively between all accountable and interested stakeholders and it should contribute to the national road safety strategy. Partners should agree:

- The aim of the programme,
- The specific objectives,
- Activities to be undertaken,
- Implementers involved,
- Funding sources and
- Monitoring and evaluation methods (including agreed indicators).

Enablers such as developing an advocacy and communications plan and engaging with civil society and the community (teachers, parents and children) should be included. The implementation plan should be inclusive and gender sensitive.



CASE STUDY 3

A partnership approach to getting helmets on children's heads and slowing down in Viet Nam

In December 2017, UNICEF and the Ministry of Labour, Invalids and Social Affairs (MOLISA), the National Assembly, the National Traffic Safety Committee, the People's Committee of Ha Noi, as well as the Ministry of Education and Training and Ministry of Health launched a national communication campaign entitled “[Have them home safe](#)” to raise awareness and advocate for interventions to reduce the growing numbers of child and adolescent road traffic deaths and injuries.

UNICEF called for strict enforcement and practice of helmet wearing for both adults and children when on a bicycle or on a motorcycle; and for all drivers slowing down on the road, particularly in areas with high concentrations of children such as around schools. Yoshimi Nishino, the Acting Deputy Representative of UNICEF Viet Nam said that “just by slowing down, observing appropriate speed limits as a driver is the first thing that we can do to save the lives of children and make roads safer for all.”

A follow-up campaign was launched in 2020 entitled “[Let your children go home safely](#)” which again called for strict compliance and practice of wearing helmets for both adults and children while riding a bicycle or on a motorbike; and urging all drivers to slow down when travelling on the road, especially in areas with a high concentration of children near schools. To download the video campaign, click [here](#).



5.5 Monitor and evaluate

Monitoring and evaluating should be an integral element of all road safety campaigns. It is through the implementation of monitoring and evaluation techniques that stakeholders can determine the success or failure of a campaign, and therefore, design future campaigns accordingly.

The primary outcome of a child road safety programme should be clear. Outcomes are best measured by regular, independently conducted surveys, discussions and interviews, before, during and after a campaign or intervention.

Other less direct outcomes, sometimes referred to as performance indicators, may also be measured. UNICEF is currently working on developing a standardized set of indicators for the region. These could include:

- Knowledge and attitudes,
- The extent of police enforcement,
- The frequency of public awareness campaigns and
- The number of children who have received practical road safety training.

Some common indicators that could be measured include:

- ▶ Child road traffic fatalities (by road user group),
- ▶ Child road traffic injuries (by road user group),
- ▶ Per cent of fatally injured unrestrained/unhelmeted children,
- ▶ Per cent increase in children using safety equipment (helmets, child restraints, seat-belts),
- ▶ Knowledge and attitudes towards (child and adolescent-related) road safety laws and penalties,
- ▶ Changes in observed behaviours (pedestrian crossing practices, speeding, helmet wearing, restraint usage),
- ▶ Vehicles fitted with ISOFIX attachments for child-restraints, and
- ▶ Changes in infrastructure around schools.

A sound monitoring and evaluation framework provides a clear and explicit understanding of how the intervention is expected to lead to the desired outcomes and impacts. The conceptual framework, known as a result chain, supported by well-defined indicators, allows one to visualize this logical sequence.

The cost of monitoring and evaluating should be built into the overall cost of the programme.

CASE STUDY 4

Understanding child injuries in Fiji

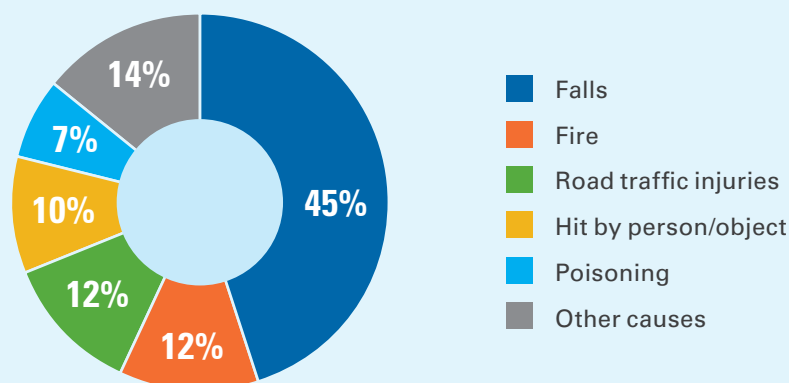
There are little or no published data on the extent of child road traffic injuries and deaths in the Pacific Islands. Most countries rely on data collated by the police despite well-known under-reporting issues. But if you can't monitor a problem, you can't manage it – so some type of robust surveillance system is always a good idea.

So, in order to better understand the impact of injuries in Fiji, a hospital data collection system entitled The Fiji Injury Surveillance in Hospitals was set up to prospectively collect injury, management and demographic information of all patients admitted to the hospital. The set up of this system was part of a larger project entitled Traffic Related Injuries in the Pacific (TRIP) funded by The Wellcome Trust and the Health Research Council of New Zealand.

The FISH system utilized a 23-item injury surveillance form adapted from the World Health Organization (WHO) [Injury surveillance guidelines](#). The data gathered was used to characterize the incidence and cause of childhood injuries in Fiji and to inform national injury prevention efforts.

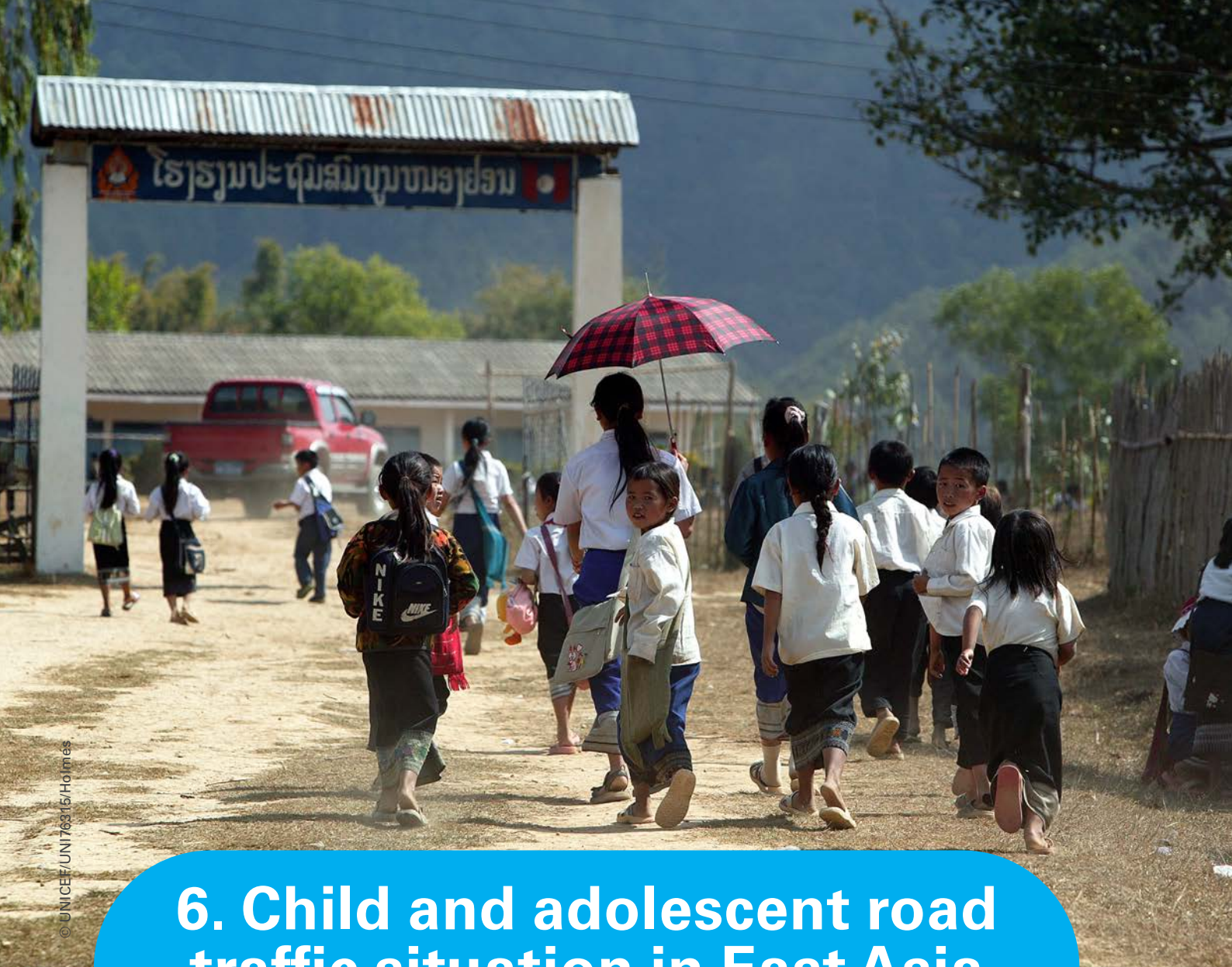
During the 12-month pilot study a total of 496 children were admitted to the hospital. Of these, 28 died of their injuries – most in the pre-hospital phase. Road traffic injuries were the leading cause of fatal injuries (28.6 per cent). They were the leading cause of death for children 5 to 9 years old and 10-14 years old. A further 60 children were admitted to hospital as a result of a road traffic collision with rates highest for children 5 to 9 years olds (46.5 per 100,000 population) (58).

Cause of injury for children younger than 15 years old admitted to hospital, Fiji



The authors encouraged the government to implement a national injury prevention strategy that includes specific actions to reduce child injuries including the investment in technical support and research to identify underlying social determinants and other contextual issues.

The findings support the need to include effective injury prevention issues as part of an overall child health strategy. They encourage the government to put in place a national strategy that builds capacity and mobilizes resources to prevent childhood injuries. Priority actions should include investment in technical support and research to identify local contextual and social determinants.



© UNICEF/UNI176315/Hoimes

6. Child and adolescent road traffic situation in East Asia and the Pacific nations

The [East Asian and Pacific nations](#) under the UNICEF East Asia and Pacific Regional Office (EAPRO) have an estimated combined population of approximately 2.11 billion people or just over a quarter of the world's 7.9 billion. This includes 573,052 million children and adolescents under the age of 20.

There were a total of 15.24 million deaths (from all causes, for all ages) in the region in 2019 (59). Of these, the majority (86 per cent) were the result of non-communicable diseases, 7 per cent were due to communicable diseases and 7 per cent were due to injuries. Approximately one quarter of all the injury-related deaths were the result of road traffic collisions.

Children and adolescents under the age of 20 years accounted for approximately 4 per cent of all the deaths in the region, with proportionally more dying from communicable causes in all 27 countries and islands (see Table 2). A total of 108,890 children and adolescents died of an injury, of which 34,577 died as a result of a road traffic collision – the fourth leading cause of death and the leading cause of injury-related death for under children and adolescents under the age of 20 years in the region (see Table 3 and Figure 5).

Table 2: Overall causes of death for all children and adolescents <20 years of age in East Asia and Pacific nations, 2019

Country	Metric	Non-communicable diseases	Communicable diseases	Injuries*
Cambodia	Number	3,068	9,862	1,636
	Percentage	21%	68%	11%
China	Number	73,538	62,484	55,382
	Percentage	38%	33%	29%
Cook Islands	Number	0	1	0
	Percentage	26%	43%	31%
DPR Korea	Number	1,775	3,166	1,803
	Percentage	26%	47%	27%
Fiji	Number	164	298	89
	Percentage	30%	54%	16%
Indonesia	Number	31,375	87,067	17,108
	Percentage	23%	64%	13%
Kiribati	Number	28	99	13
	Percentage	20%	71%	9%
Lao DPR	Number	1,631	6,174	778
	Percentage	19%	72%	9%
Malaysia	Number	1,955	2,830	1,607
	Percentage	31%	44%	25%
Marshall Islands	Number	8	22	6
	Percentage	22%	61%	17%
Micronesia	Number	12	26	11
	Percentage	24%	53%	23%
Mongolia	Number	400	1,102	326
	Percentage	22%	60%	18%
Myanmar	Number	32,748	12,300	7,852
	Percentage	62%	23%	15%
Nauru	Number	2	6	2
	Percentage	25%	55%	20%
Niue	Number	0	0	0
	Percentage	27%	52%	21%
Palau	Number	1	3	1
	Percentage	19%	53%	28%
Papua New Guinea	Number	3,637	14,924	2,049
	Percentage	18%	72%	10%
Philippines	Number	18,032	54,294	8,666
	Percentage	22%	67%	11%
Samoa	Number	20	45	18
	Percentage	24%	55%	22%
Solomon Islands	Number	134	485	117
	Percentage	18%	66%	16%
Thailand	Number	2,730	3,797	4,419
	Percentage	25%	35%	40%

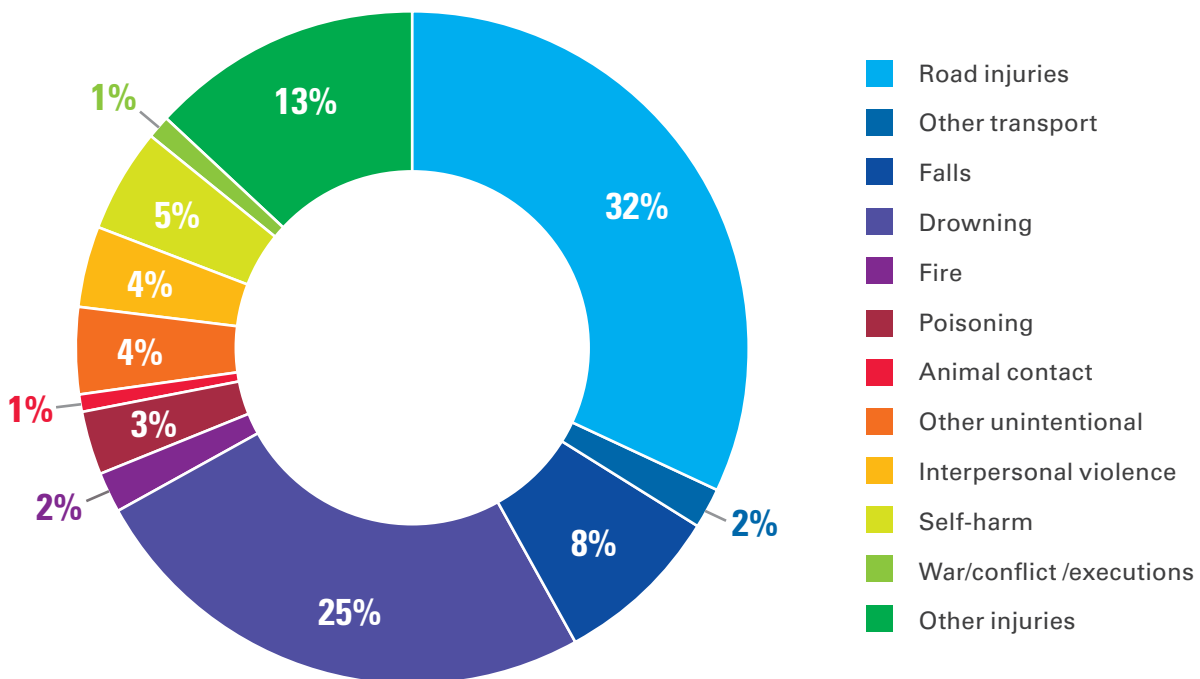
6. Child and adolescent road traffic situation in East Asia and the Pacific nations

Country	Metric	Non-communicable diseases	Communicable diseases	Injuries*
Timor-Leste	Number	1,103	271	142
	Percentage	18%	73%	9%
Tokelau	Number	0	0	0
	Percentage	26%	57%	17%
Tonga	Number	28	10	7
	Percentage	22%	22%	16%
Tuvalu	Number	1	3	1
	Percentage	24%	55%	21%
Vanuatu	Number	49	171	37
	Percentage	19%	66%	14%
Viet Nam	Number	6,338	12,516	6,818
	Percentage	25%	49%	27%
TOTAL	Number	146,425	304,306	108,890
	Percentage	26%	54%	19%

* Injuries include intentional and unintentional causes

Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

Figure 5: Causes of injury-related death among children and adolescents <20 years of age in East Asia and Pacific nations, 2019



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

6.1 The burden of child road traffic deaths and injuries in East Asia and Pacific nations

In the region, road traffic collisions were among the top five causes of death for children and adolescents over the age of 1 year, with road traffic collisions being the leading cause of death for children and adolescents ages 15–19 year olds and the second leading cause for both children aged 5–9 years old and 10–14 years old (Table 3).

Table 3: Leading causes of child and adolescent death in East Asia and the Pacific nations, 2019

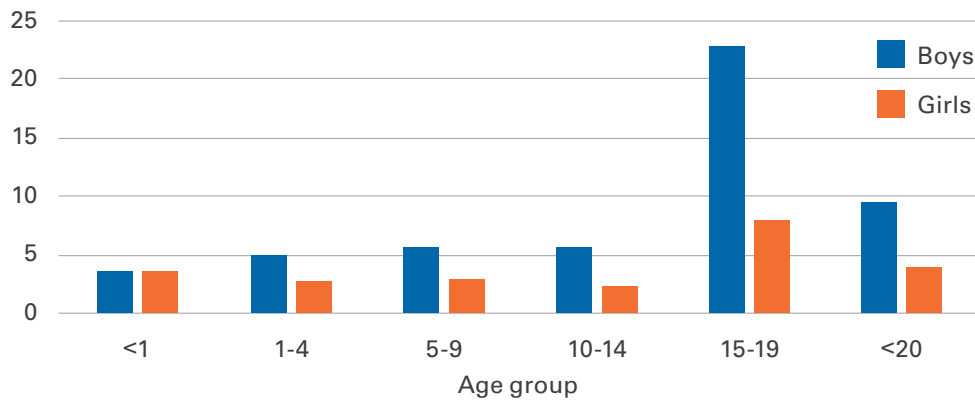
Rank	Under 1 year	1-4 years	5-9 years	10-14 years	15-19 years	All <20 years
1	Neonatal disorders	Lower respiratory infections	Drowning	Drowning	Road injuries	Neonatal disorders
2	Congenital birth defects	Drowning	Road injuries	Road injuries	Drowning	Congenital birth defects
3	Lower respiratory infections	Congenital birth defects	Congenital birth defects	Typhoid & paratyphoid	Self-harm	Lower respiratory infections
4	Diarrheal diseases	Diarrheal diseases	Leukaemia	Leukaemia	Leukaemia	Road injuries
5	Sexually transmitted diseases	Road injuries	Lower respiratory infections	Congenital birth defects	Typhoid & paratyphoid	Drowning
6	Foreign bodies	Whooping cough	Typhoid & paratyphoid	Lower respiratory infections	Interpersonal violence	Diarrheal diseases
7	Meningitis	Measles	Brain & CNS cancers	Other malignant neoplasms	Stroke	Leukaemia
8	Whooping cough	Dengue	Falls	Falls	Falls	Whooping cough
9	Sudden infant death syndrome	Leukaemia	Dengue	Brain & CNS cancers	Congenital birth defects	Falls
10	Paralytic ileus & intestinal obstruction	Falls	Diarrheal diseases	Self-harm	Tuberculosis	Typhoid & paratyphoid
11	Tuberculosis	HIV/AIDS	Other malignant neoplasms	Tuberculosis	Other malignant neoplasms	Meningitis
12	Dengue	Meningitis	Meningitis	Diarrheal disease	Ischemic heart disease	Sexually transmitted diseases
13	Encephalitis	Encephalitis	Tuberculosis	Chronic kidney disease	Chronic kidney disease	Foreign bodies
14	Exposure to mechanical forces	Typhoid & paratyphoid	Other unintentional injuries	Other unintentional injuries	Lower respiratory infections	Dengue
15	Protein energy malnutrition	Asthma	Encephalitis	Dengue	Cirrhosis & other chronic liver diseases	Tuberculosis

Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

6. Child and adolescent road traffic situation in East Asia and the Pacific nations

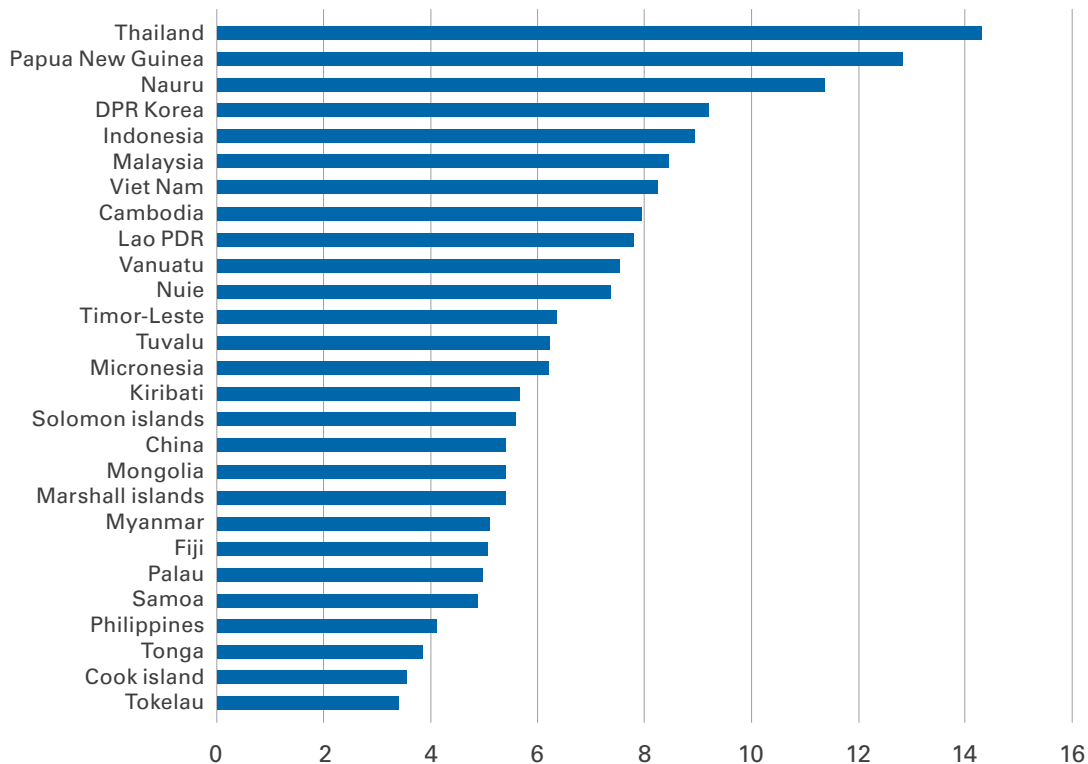
Of the 34,577 child and adolescent road traffic deaths that occurred in East Asia and the Pacific nations in 2019, 74 per cent were boys. The overall road traffic death rate for the region was 6.87 per 100,000 population, with rates highest among 15–19-year-olds and boys across all age groupings (Figure 6). There were clear country differences, with Thailand and Papua New Guinea having rates in excess of 12 per 100,000 population, and multiple Pacific Islands and the Philippines with rates at or below 5 per 100,000 (Figure 7).

Figure 6: Road traffic death rates per 100,000 children and adolescents in East Asia and Pacific nations, 2019



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

Figure 7: Road traffic death rates for children and adolescents per 100,000 population, <20 years of age, both sexes, in East Asia and the Pacific nations, 2019

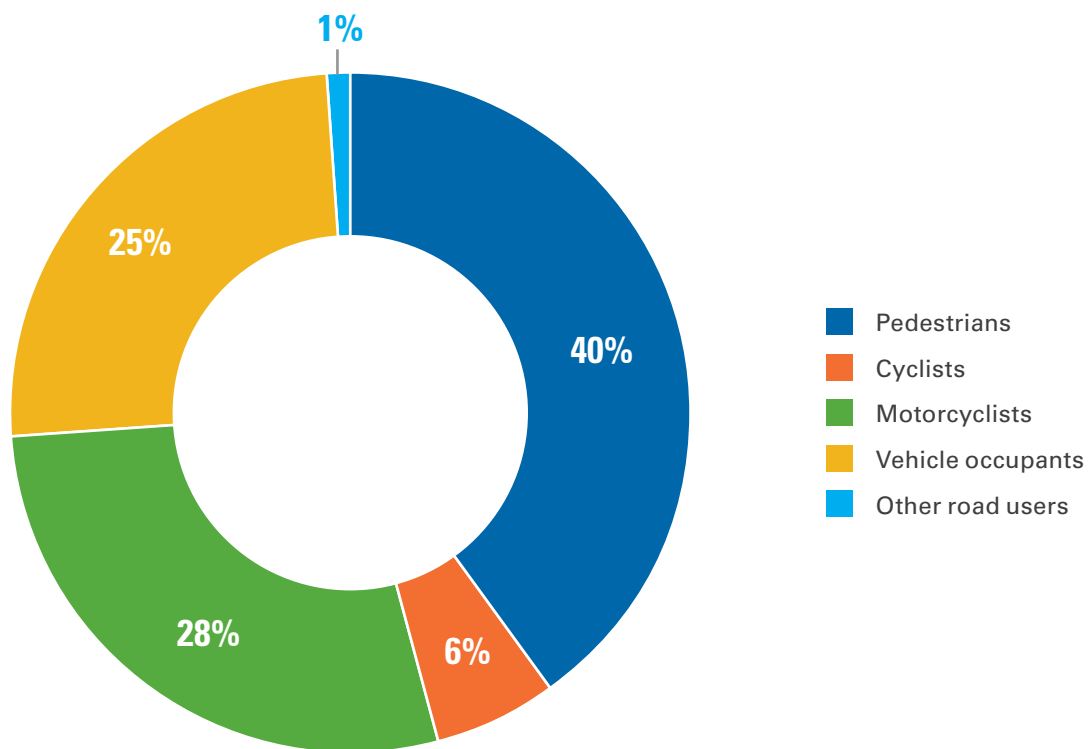


Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

According to Global Burden of Disease (GBD) 2019 data, nearly three quarters of the children and adolescents in the region who died in road traffic collision were vulnerable road users – pedestrians (40 per cent), motorcyclists (28 per cent) and cyclists (6 per cent) (Figure 8). However, there were distinct differences between countries and between countries and islands (Figure 9 and Table 4). For example, 60 per cent of deaths in China were pedestrians while 57 per cent of deaths in Thailand were motorcyclists. Mongolia (51 per cent), Malaysia (45 per cent) and the Philippines (44 per cent) showed high levels of child vehicle occupant deaths, most likely reflecting the level of motorization in these countries.

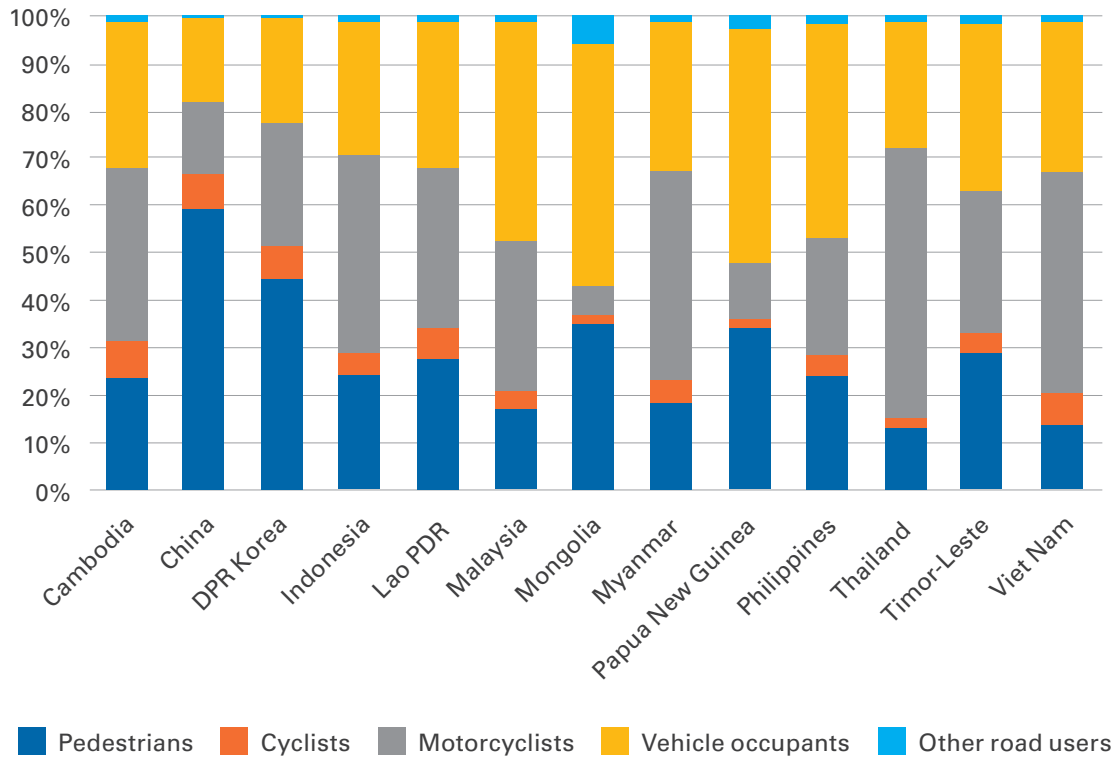


Figure 8: Cause of death by road user group for children and adolescents <20 years of age, both sexes, in East Asia and Pacific nations, 2019



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

Figure 9: Road user deaths in East Asia nations for children and adolescents <20 years of age, both sexes, 2019



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>



The Cook Islands, Niue, Palau, Tokelau and Tuvalu did not register any road traffic deaths in 2019. For other Pacific Islands nations, numbers were small and are presented in Table 4.

Table 4: Road user deaths for children and adolescents <20 years of age, both sexes, in the Pacific islands, 2019

Country	Pedestrians	Cyclists	Motorcyclists	Vehicle occupants	Other road users	All road users
Fiji	4	1	2	10	0	17
Kiribati	0	0	1	2	0	3
Marshall Islands	0	0	0	1	0	1
Micronesia (Federated States of)	0	0	0	2	0	3
Nauru	0	0	0	0	0	1
Samoa	2	0	0	3	0	5
Solomon Islands	6	0	3	9	0	18
Tonga	1	0	0	1	0	2
Vanuatu	4	0	1	5	0	11

Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

There was a total of 2.7 million years of disability-adjusted life years (DALY) lost due to road traffic collisions among children and adolescents <20 years of age in the 27 nations (Table 5). Since DALYs take into consideration both years lived with a disability (YLD) and years of life lost (YLL) due to premature mortality, those countries with high levels of morbidity and mortality due to road traffic collisions such as China, Indonesia, Viet Nam, Thailand and the Philippines show hundreds of thousands of lost years.

There was a total of 88,592 YLD among children and adolescents <20 years of age in the 27 nations.

Children and adolescents who sustained a disability as a result of a motorcycle collision accounted for 38 per cent of all YLDs in the region (Figure 10). Cyclists and pedestrians – also vulnerable road users – make up a further 43 per cent. Many of these children and adolescents will require on-going support – medical, educational, social and economic – for years which can leave families with large out-of-pocket costs and possibly even push them into poverty if a potential breadwinner needs to look after the child at home.

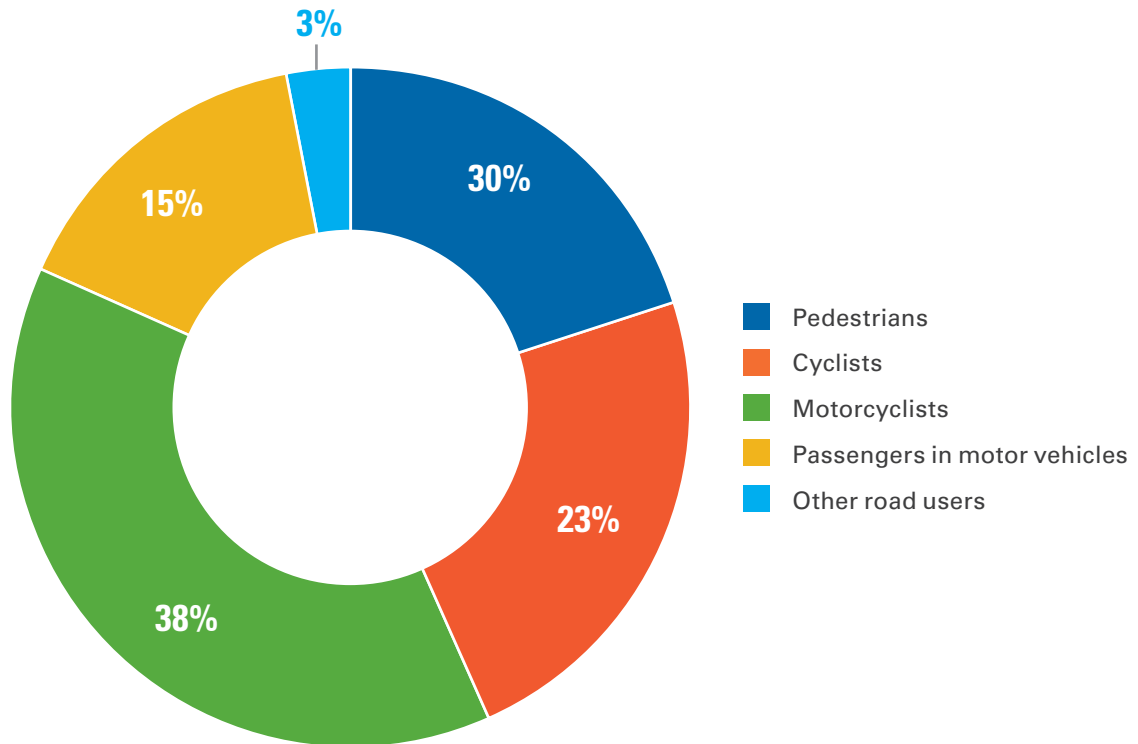
Table 5: Years lived with a disability (YLD), years of life lost (YLL) due to premature mortality 36 and disability-adjusted life years (DALYs) as a result of road traffic collisions among children and adolescents <20 years of age, both sexes, in East Asia and Pacific nations, 2019

Country	YLD	YLL	DALYs*
Cambodia	986	39,137	40,123
China	45,608	1,270,743	1,316,351
Cook Islands	1	15	15
Democratic People's Republic of Korea	684	46,441	47,125
Fiji	35	1,349	1,384
Indonesia	18,796	595,050	613,846
Kiribati	4	231	235
Lao People's Democratic Republic	592	17,591	18,183
Malaysia	2,511	64,630	67,141
Marshall Islands	2	99	101
Micronesia (Federated States of)	4	199	203
Mongolia	307	5,213	5,521
Myanmar	2,581	76,104	78,685
Nauru	1	45	45
Niue	0	3	3
Palau	0	17	18
Papua New Guinea	585	47,241	47,826
Philippines	5,935	146,877	152,812
Samoa	10	358	368
Solomon Islands	23	1,351	1,374
Thailand	3,011	157,806	160,818
Timor-Leste	105	3,247	3,351
Tokelau	0	2	2
Tonga	4	137	141
Tuvalu	0	22	22
Vanuatu	16	809	825
Viet Nam	6,788	171,242	178,030
TOTAL	88,592	2,645,957	2,734,549

* One DALY represents the loss of the equivalent of one year of full health. It is the sum of YLD (years of healthy life lost due to a disability) and YLL (years of life lost due to premature mortality).

Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

Figure 10: Proportion of years lived with a disability (YLD) by road user group for children and adolescents <20 years of age, both sexes, in East Asia and Pacific nations, 2019



Source: Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020. Available from <https://vizhub.healthdata.org/gbd-results/>

6.2 The cost of road traffic injuries and deaths

Road traffic collisions place considerable physical and psychosocial strain on those children and adolescents who are injured or disabled as well as on their families. The financial strain can be severe as families need to absorb the direct medical and rehabilitation costs, and the indirect costs created as a result of potential lost earnings (for the child) or actual lost earnings (if a parent needs to stop working to look after the child or adolescent). In addition, the emotional and practical impacts on families and caregivers are unquantifiable.

Although there are no child-specific costs related to road traffic crashes in East Asia and the Pacific nations, there are data from The World Bank for all ages and all road users indicating that serious injuries and road traffic fatalities cost a combined total of US\$832,166 million to the region. On average, countries lose 5.5 per cent of their gross domestic product (GDP) to road traffic collisions (Table 6).

Table 6: The cost of serious and fatal road traffic collisions (all ages), and per cent of GDP in East Asia and Pacific nations

Country	Cost of serious and fatal road traffic injuries (US\$ in 2016)	Cost as % of GDP
Cambodia	1,192 million	5.9
China	688,150 million	6.2
Cook Islands	no data	no data
Democratic People's Republic of Korea	no data	no data
Fiji	162 million	3.3
Indonesia	37,584 million	4.0
Kiribati	no data	no data
Lao People's Democratic Republic	860 million	5.4
Malaysia	24,072 million	8
Marshall Islands	no data	no data
Micronesia (Federated States of)	2 million	0.6
Mongolia	607 million	5.4
Myanmar	4,179 million	6.6
Nauru	no data	no data
Niue	no data	no data
Palau	no data	no data
Papua New Guinea	955 million	4.6
Philippines	12,410 million	4.1
Samoa	30 million	3.8
Solomon Islands	69 million	5.6
Thailand	44,710 million	10.8
Timor-Leste	110 million	4.4
Tokelau	no data	no data
Tonga	24 million	5.9
Tuvalu	no data	no data
Vanuatu	41 million	5.1
Viet Nam	18,201 million	8.9

Source: (17)

The cost effectiveness of interventions has been quantified in high-income countries such as Sweden, Australia and the United Kingdom and other examples are included in the UNICEF [Global Technical Guidance for Child and Adolescent Road Safety](#). Appropriately adapted road safety interventions implemented in the region can cut the volume of road traffic deaths and injuries. However, to bring about such a reduction requires both political and financial investments in prevention efforts targeting young people.

References

1. Global status report on road safety 2018. Geneva: World Health Organization, 2018 (Available from: https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/, Accessed on 10 February 2023).
2. Peden M, Oyegbite K, Ozanne-Smith J, *et al.* World Report on Child Injury Prevention. Geneva: World Health Organization 2008 (Available from: http://www.who.int/violence_injury_prevention/child/injury/world_report/en/, Accessed on 10 February 2023).
3. Global Plan: Decade of Action for Road Safety 2021–2030. Geneva, Switzerland: World Health Organization, 2021 (Available from: https://cdn.who.int/media/docs/default-source/documents/health-topics/road-traffic-injuries/global-plan-for-road-safety.pdf?sfvrsn=65cf34c8_33&download=true, Accessed on 10 February 2023).
4. Peden MS, Richard; Sleet, David; Mohan, Dinesh; Hyder, Adnan A; Jarawan, Eva; Mathers, Colin D. World report on road traffic injury prevention. Geneva, Switzerland: World Health Organization, 2004 (Available from: <https://www.who.int/publications/i/item/world-report-on-road-traffic-injury-prevention>, Accessed on 10 February 2023).
5. Vincenten JA; Draisin N; Sengoelge M. Technical Guidance: Child and Adolescent Road Safety New York, USA: UNICEF, 2022 (Available from: <https://www.unicef.org/documents/unicef-technical-guidance-for-child-and-adolescent-road-safety>, Accessed on 10 February 2023).
6. UNICEF Strategic Plan 2022–2025. New York, USA: UNICEF, 2022 (Available from: <https://www.unicef.org/reports/unicef-strategic-plan-2022-2025>, Accessed on 10 February 2023).
7. Convention on the Rights of the Child, in A/RES/44/25, United Nations General Assembly, Editor., 1989.
8. Ten strategies for keeping children safe on the road. Geneva, Switzerland: World Health Organization, 2015 (Available from: <https://apps.who.int/iris/handle/10665/162176>, Accessed on 10 February 2023).
9. Patton GC, Sawyer SM, Santelli JS, *et al.* Our future: a Lancet commission on adolescent health and wellbeing. *The Lancet*, 2016. 387(10036): p. 2423-2478.
10. Accelerated action for the health of adolescents (AA-HA!): a manual to facilitate the process of developing national adolescent health strategies and plans. Geneva, Switzerland: World Health Organization, 2019 (Available from: <https://apps.who.int/iris/rest/bitstreams/1265380/retrieve>, Accessed on 10 February 2023).
11. Job R, Mbugua L. Road Crash Trauma, Climate Change, Pollution and the Total Costs of Speed: Six graphs that tell the story. Washington DC: Global Road Safety Facility, World Bank, 2020 (Available from: <https://documents1.worldbank.org/curated/en/298381607502750479/pdf/Road-Crash-Trauma-Climate-Change-Pollution-and-the-Total-Costs-of-Speed-Six-graphs-that-tell-the-story.pdf>, Accessed on 10 February 2023).
12. Save lives: A road safety technical package. Geneva, Switzerland: World Health Organization, 2017 (Available from: <https://www.who.int/publications/i/item/save-lives-a-road-safety-technical-package>, Accessed on 10 February 2023).
13. Toroyan T, Peden M. Youth and road safety. Geneva, Switzerland: World Health Organization, 2007 (Available from: http://apps.who.int/iris/bitstream/10665/43607/1/9241595116_eng.pdf, Accessed on 10 February 2023).
14. Hakkert AS, Gitelman V. Thinking about the history of road safety research: Past achievements and future challenges. *Transportation research part F: traffic psychology and behaviour*, 2014. 25: p. 137-149.
15. Zero road deaths and serious injuries. Leading a paradigm shift to a safe system. Paris, France: Organisation for Economic Co-operation and Development 2016 (Available from: <https://doi.org/10.1787/9789282108055-en>, Accessed on 10 February 2023).

References

16. Turner B, Job S, Mitra S. Guide for Road Safety Interventions. 2020.
17. Wambulwa WM, Job RFS, Turner BM. Guide for Road Safety Opportunities and Challenges: Low and Middle Income Country Profiles. 2020.
18. The high toll of traffic injuries: Unacceptable and preventable. Washington DC: The World Bank Group, 2017 (Available from: <https://openknowledge.worldbank.org/handle/10986/29129>, Accessed on 10 February 2023).
19. Sheehan P, Sweeny K, Rasmussen B, *et al.* Building the foundations for sustainable development: a case for global investment in the capabilities of adolescents. *The Lancet*, 2017. 390(10104): p. 1792–1806.
20. Griffiths M, Fleiter JJ, Hysell M, *et al.* Technical Guide to assist the Implementation of Child Restraint Systems (CRS) in Low- and Middle-Income Countries. Geneva, Switzerland: Global Road Safety Partnership, 2021 (Available from: Accessed on
21. Consolidated Resolution on Road Traffic. Geneva, Switzerland: UNECE, 2010 (Available from: https://unece.org/DAM/trans/roadsafe/publications/docs/Consolidated_Resolution_on%20Road_Traffic_RE1_e.pdf, Accessed on 10 February 2023).
22. Strengthening road safety legislation: a practice and resource manual for countries. Geneva, Switzerland: World Health Organization, 2013 (Available from: <https://www.who.int/publications/i/item/strengthening-road-safety-legislation>, Accessed on 8/8/2022).
23. Barraco RD, Cheng JD, Bromberg WJ, *et al.* Child passenger safety: an evidence-based review. *Journal of Trauma and Acute Care Surgery*, 2010. 69(6): p. 1588–1590.
24. Bilston LE, Du W, Brown J. A matched-cohort analysis of belted front and rear seat occupants in newer and older model vehicles shows that gains in front occupant safety have outpaced gains for rear seat occupants. *Accident Analysis and Prevention*, 2010. 42(6): p. 1974–1977.
25. Glass RJ, Segui-Gomez M, Graham JD. Child passenger safety: decisions about seating location, airbag exposure, and restraint use. *Risk Analysis*, 2000. 20(4): p. 521–528.
26. Best Practice Guidelines for the Safe Restraint of Children Travelling in Motor Vehicles, 2nd Edition. Sydney, Australia: Neuroscience Research Australia and Kidsafe Australia, 2020 (Available from: <http://www.neura.edu.au/CRS-guidelines> Accessed on 10 February 2023).
27. Twisk DA, Vlakveld WP, Commandeur JJ, *et al.* Five road safety education programmes for young adolescent pedestrians and cyclists: A multi-programme evaluation in a field setting. *Accident Analysis and Prevention*, 2014. 66: p. 55–61.
28. McMurry TL, Arbogast KB, Sherwood CP, *et al.* Rear-facing versus forward-facing child restraints: an updated assessment. *Injury prevention*, 2018. 24(1): p. 55–59.
29. Glerum KM, Zonfrillo MR, Fleisher L, *et al.* Systematic review of child restraint system interventions (2007–2018). *Traffic injury prevention*, 2019. 20(8): p. 866–872.
30. Ehiri JE, Ejere HO, Magnussen L, *et al.* Interventions for promoting booster seat use in four to eight year olds travelling in motor vehicles. *Cochrane Database of Systematic Reviews*, 2006(1).
31. Williams S, Whitlock E, Smith P, *et al.* Primary care interventions to prevent motor vehicle occupant injuries. 2010.
32. Thompson DC, Rivara F, Thompson R. Helmets for preventing head and facial injuries in bicyclists. *Cochrane database of systematic reviews*, 1999(4).
33. Ivers R, Blows S, Kardamanidis K, *et al.* Motorcycle helmet legislation for preventing injuries in motorcyclists. *Cochrane Database of Systematic Reviews*, 2004(3).
34. Liu BC, Ivers R, Norton R, *et al.* Helmets for preventing injury in motorcycle riders. *Cochrane database of systematic reviews*, 2008(1).
35. Araujo M, Illanes E, Chapman E, *et al.* Effectiveness of interventions to prevent motorcycle injuries: systematic review of the literature. *International journal of injury control and safety promotion*, 2017. 24(3): p. 406–422.
36. Simons-Morton B, Ouimet MC. Parent involvement in novice teen driving: a review of the literature. *Injury Prevention*, 2006. 12(suppl 1): p. i30–i37.

37. Ward A, Lewis SR, Weiss H. Mobility management to prevent, reduce, or delay driving a car in teenagers. *Cochrane database of systematic reviews*, 2020(8).
38. Salamon T, Lerner A, Rothen D, *et al.* Retrospective analysis of case series of patients with vascular war injury treated in a district hospital. *Injury*, 2016. 47(4): p. 811–817.
39. Russell KF, Vandermeer B, Hartling L. Graduated driver licensing for reducing motor vehicle crashes among young drivers. *Cochrane database of systematic reviews*, 2011(10).
40. Ehsani JP, Ionides E, Klauer SG, *et al.* Effectiveness of cell phone restrictions for young drivers: review of the evidence. *Transportation research record*, 2016. 2602(1): p. 35–42.
41. McCart AT, Hellinga LA, Bratiman KA. Cell phones and driving: review of research. *Traffic injury prevention*, 2006. 7(2): p. 89–106.
42. Cazzulino F, Burke RV, Muller V, *et al.* Cell phones and young drivers: a systematic review regarding the association between psychological factors and prevention. *Traffic injury prevention*, 2014. 15(3): p. 234–242.
43. Mayhew D, Simpson HM. The safety value of driver education and training. *Injury prevention*, 2002. 8(suppl 2): p. ii3–ii8.
44. Dragutinovic N, Twisk D. The effectiveness of road safety education: A literature review. SWOV Institute for Road Safety Research, 2006.
45. Toroyan T, Peden M. Youth and road safety. Geneva: World Health Organization, 2007: p. 5–13.
46. Brown J, Schonstein L, Ivers R, *et al.* Children and motorcycles: a systematic review of risk factors and interventions. *Injury prevention*, 2018. 24(2): p. 166–175.
47. Kwan I, Mapstone J. Interventions for increasing pedestrian and cyclist visibility for the prevention of death and injuries. *Cochrane Database of Systematic Reviews*, 2006(4).
48. Designing Streets for Kids. New York, USA: National Association of City Transportation Officials and Global Designing Cities Initiative, December 2020 (Available from: Accessed on
49. Grundy C, Steinbach R, Edwards P, *et al.* Effect of 20 mph traffic speed zones on road injuries in London, 1986–2006: controlled interrupted time series analysis. *BMJ*, 2009. 339: p. b4469.
50. Poswayo A, Kalolo S, Rabonovitz K, *et al.* School Area Road Safety Assessment and Improvements (SARSAI) programme reduces road traffic injuries among children in Tanzania. *Injury Prevention*, 2019. 25(5): p. 414.
51. Assessment protocol: Child occupant protection July 2022–December 2025. London, United Kingdom: Global NCAP and Euro NCAP, 2021 (Available from: <https://static1.squarespace.com/static/5fb4ea8933ae6c208c3dac41/t/60dd9e20dbf3e8459e3ef595/1625136679081/assessment+protocol+Child+2021.pdf>, Accessed on 10 February 2023).
52. Data systems: a road safety manual for decision-makers and practitioners. 2010.
53. Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Institute for Health Metrics and Evaluation, Editor. Seattle, United States, 2020.
54. Hidayati N, Liu R, Montgomery F. The impact of school safety zone and roadside activities on speed behaviour: The Indonesian case. *Procedia-Social and Behavioral Sciences*, 2012. 54: p. 1339–1349.
55. Mtika W, Wilcox H, N FDC. Stakeholder Mapping Tool for Applying Research to Policy and Practice for Health (ARCH). (Available from: <https://arch.tghn.org/stakeholder-mapping-tool-arch-doi/>, Accessed on 10 February 2023).
56. Ederer DJ, Bui TV, Parker EM, *et al.* Helmets for Kids: evaluation of a school-based helmet intervention in Cambodia. *Injury Prevention*, 2016. 22(1): p. 52–58.
57. An B, Yang SJ. Evaluation of a road safety educational programme for senior elementary school students in Cambodia: A pilot study. *Health education journal*, 2022. 81(4): p. 451–462.
58. Naisaki A, Wainiqolo I, Kafoa B, *et al.* Fatal and hospitalised childhood injuries in Fiji (TRIP Project-3). *Journal of Paediatrics and Child Health*, 2013. 49(1): p. 63–67.
59. Global Health Estimates 2020: Disease burden by Cause, Age, Sex, by Country and by Region, 2000–2019. Geneva, Switzerland: World Health Organization 2020.



Country profiles

Country-specific information is included in the following profiles. The data included have been obtained from published information (see the Appendix) and through a brief survey completed by UNICEF country surveys.

Included in the country profiles are basic demographic information, including population numbers and percentage of children and adolescents <20 years of age, gender, proportion living in urban areas, and gross national income (GNI) per capita. Aggregate information for the region revealed the following:

- The proportion of children and adolescents ranged from almost 0 per cent in Nauru, Niue, and Tokelau to 50.7 per cent in Solomon Islands (average 33.78 per cent);
- The proportion of males in the region ranged from 47 per cent in Cook Islands to 60 per cent in Myanmar;
- On average around 48 per cent of the populations live in urban areas ranging from just 0 per cent in Tokelau to 100 per cent in Niue;
- The GNI per capita varied from US\$1,140 in Myanmar to US\$19,470 in Nauru; and
- Based on the World Bank classifications, only Nauru is a high-income country, with the remaining countries in the region being upper-middle income (8 countries) and lower-middle income (15 countries).

The country profiles also include basic information about causes of death, road user groups and age groups as well as responses to the issue. Less than half of the countries identify child injuries as a national priority, with only seven countries having a dedicated national child injury prevention unit. Other notable results include the following:

- **WHO recommends** that the optimal speed limit in cities and towns should be 30 km/hr. Of the 27 East Asia and Pacific countries, no country has implemented these limits. Existing limits ranged from 40 km/hr to 80 km/hr.
- Thirteen countries have either nation-wide or partial restrictions of speed control around schools.
- The average age to purchase alcohol as a minor is 19.3 years, with Cambodia, Timor-Leste, and Vanuatu having no legal age restriction. The drink-driving limit of blood alcohol concentration for novice drivers ranged from <0.05-0.08 g/dl but Viet Nam and Fiji have a zero limit for these inexperienced drivers.
- All the nations have a national motorcycle helmet law and all countries except Fiji and Myanmar allow child passengers on motorcycles.
- None of the countries have completely separated cycling lanes, but nine countries do have some 'partially' separated lanes in cities.
- Out of the 27 countries, only China, Fiji, Lao PDR, and Cambodia have a child restraint law. None of the countries except Malaysia and Thailand have a legal mandate for new vehicles to have ISOFIX anchorages.
- Ten countries include road safety and eight countries include first aid training in the school curriculum.

CAMBODIA

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	16.2 million
GNI per capita	US\$1,550
Country income group	Lower middle income

23.40%



Urban living

49.50%



Males

38.80%



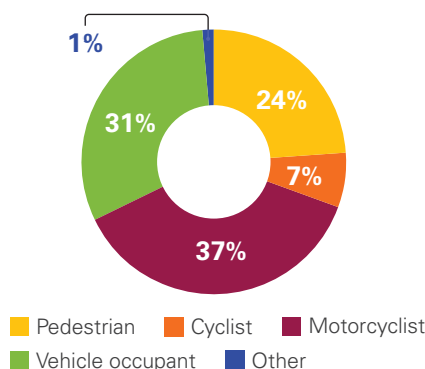
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

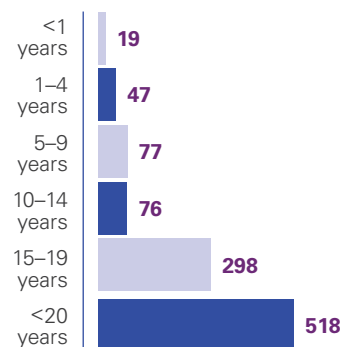
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	1,636
Road traffic deaths (n)	518
Rate per 100,000 population	7.94
% boys	75%
Years of healthy life lost to RTI-related disability	986

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?

Yes (Ministry of Health, Ministry of Public Work and Transportation, Ministry of Interior, and Ministry of Education, Youth and Sport)



SPEEDING

Urban speed limit
40 km/hr

Can local authorities modify speed limits?

No

Are speeds controlled around schools?*

Yes (30 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.05 g/dl

Blood alcohol content for novice drivers
<0.05 g/dl

Age to buy alcohol
None



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?
Yes

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

Yes

Is first aid training mandatory in secondary schools?

Yes



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	1.42 billion
GNI per capita	US\$11,890
Country income group	Upper middle income

59.20%



Urban living

51.10%



Males

23.90%



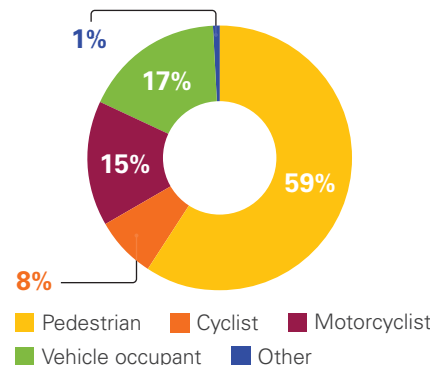
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

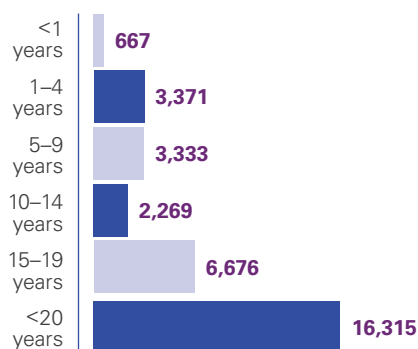
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	55,382
Road traffic deaths (n)	16,315
Rate per 100,000 population	5.44
% boys	69%
Years of healthy life lost to RTI-related disability	45,608

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?

Yes (National Administration of Disease Control and Prevention)



SPEEDING

Urban speed limit
30km/hr (For roads without central lines), **50km/hr** (For roads with only one motor vehicle lane in the same direction)

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

Yes (30 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.02 g/dl

Blood alcohol content for novice drivers
<0.02 g/dl

Age to buy alcohol
>18 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?*

Prohibited under 12 years

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?*

Yes

Is there a child restraint standard?*

Yes

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat
No national regulation, but some provincial level regulations



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?*

Yes

Is first aid training mandatory in secondary schools?*

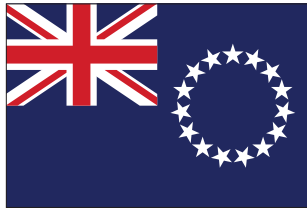
Yes



* Data gathered or updated by UNICEF

COOK ISLANDS

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	17.4 thousand
GNI per capita	–
Country income group	–

75.10%



Urban living

47.10%



Males

23.50%



Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	0
Road traffic deaths (n)	0.20
Rate per 100,000 population	3.57
% boys	69%
Years of healthy life lost to RTI-related disability	1

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE

<1 years	0
1–4 years	0
5–9 years	0
10–14 years	0
15–19 years	0
<20 years	0

RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
–
- Is there a dedicated child injury prevention unit?
–



SPEEDING

- Urban speed limit
50 km/hr
- Can local authorities modify speed limits?
No
- Are speeds controlled around schools?*



ALCOHOL

- Blood alcohol content for drivers
<0.08 g/dl
- Blood alcohol content for novice drivers
<0.08 g/dl
- Age to buy alcohol
18 years



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
Yes
- Are children allowed on motorcycles?
Yes
- Are there separated cycle lanes?*



OCCUPANT RESTRAINTS

- Is there a child restraint law?
No
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
–
- Is first aid training mandatory in secondary schools?
–



* Data gathered UNICEF

DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	25.7 million
GNI per capita	–
Country income group	Low income

61.90%



Urban living

49.30%



Males

26.07%



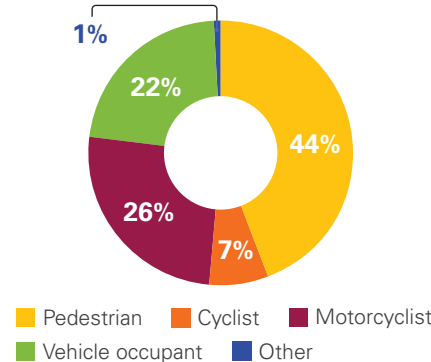
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

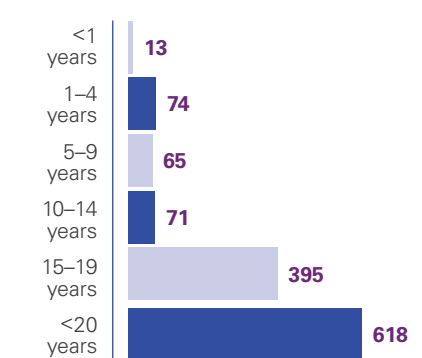
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	1,803
Road traffic deaths (n)	618
Rate per 100,000 population	9.22
% boys	73%
Years of healthy life lost to RTI-related disability	684

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
–
- Is there a dedicated child injury prevention unit?
–



SPEEDING

- Urban speed limit
80 km/hr
- Can local authorities modify speed limits?
Yes
- Are speeds controlled around schools?*



ALCOHOL

- Blood alcohol content for drivers
<0.05 g/dl
- Blood alcohol content for novice drivers
<0.05 g/dl
- Age to buy alcohol
19 years



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
Yes
- Are children allowed on motorcycles?
Yes
- Are there separated cycle lanes?*



OCCUPANT RESTRAINTS

- Is there a child restraint law?
No
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
Only allowed with child restraint



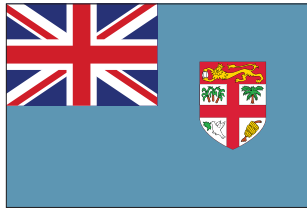
EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
–
- Is first aid training mandatory in secondary schools?
–



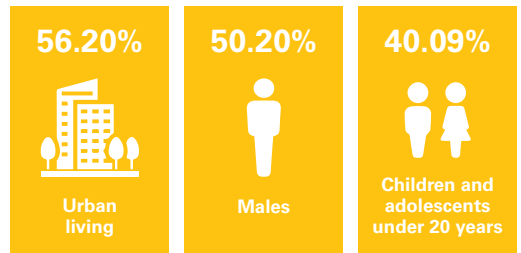
* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	9.18 lakhs
GNI per capita	US\$4,860
Country income group	Upper middle income

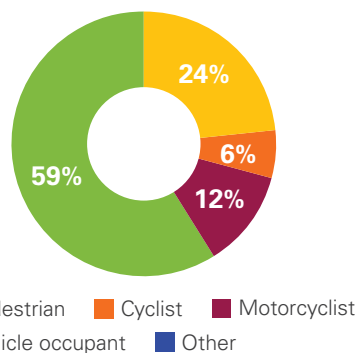


CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

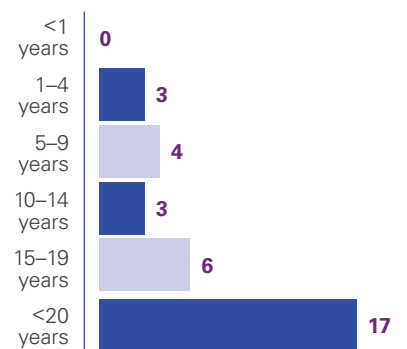
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	89
Road traffic deaths (n)	17
Rate per 100,000 population	5.06
% boys	64%
Years of healthy life lost to RTI-related disability	35

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?
No (Comes under police)



SPEEDING

Urban speed limit
50 km/hr

Can local authorities modify speed limits?
No

Are speeds controlled around schools?*

Yes (20 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.08 g/dl

Blood alcohol content for novice drivers
0 g/dl

Age to buy alcohol

—



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?

Prohibited under 8 years

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?
Yes

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat

Allowed in child restraint



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

Yes

Is first aid training mandatory in secondary schools?

Yes



* Data gathered UNICEF

INDONESIA

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	269.5 million
GNI per capita	US\$4,140
Country income group	Lower middle income

55.30%



Urban living

50.40%



Males

34.10%



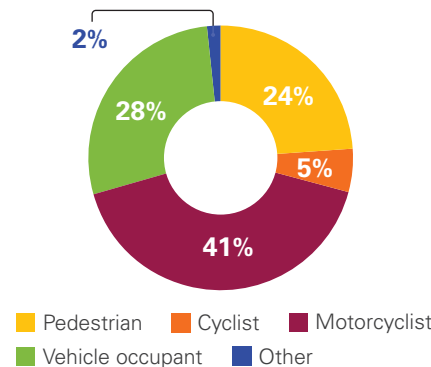
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

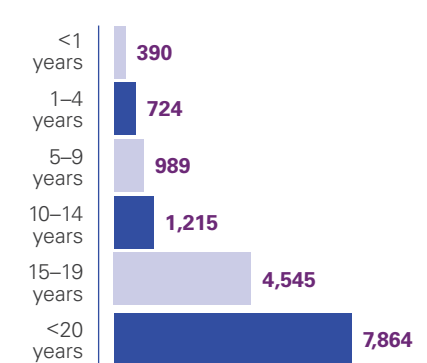
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	17,108
Road traffic deaths (n)	7,864
Rate per 100,000 population	8.94
% boys	81%
Years of healthy life lost to RTI-related disability	18,796

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

No

Is there a dedicated child injury prevention unit?

No



SPEEDING

Urban speed limit
50 km/hr

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

Partial



ALCOHOL

Blood alcohol content for drivers
None

Blood alcohol content for novice drivers
None

Age to buy alcohol
21 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
Yes

Are there separated cycle lanes? *
Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
No

Is first aid training mandatory in secondary schools?
No



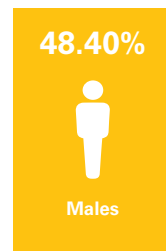
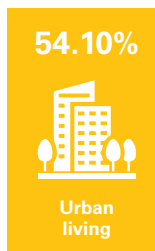
* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	1.24 lakhs
GNI per capita	US\$2,910
Country income group	Lower middle income

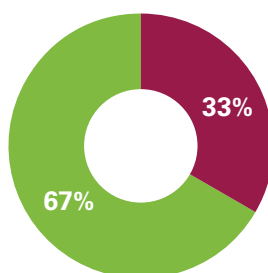


CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

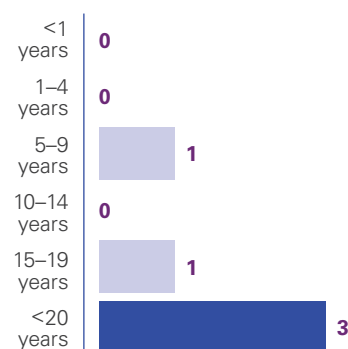
All injury deaths (n)	13
Road traffic deaths (n)	3
Rate per 100,000 population	5.67
% boys	76%
Years of healthy life lost to RTI-related disability	4

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?
No



SPEEDING

Urban speed limit
40 km/hr

Can local authorities modify speed limits?
No

Are speeds controlled around schools?*

Yes (20 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.08 g/dl

Blood alcohol content for novice drivers
<0.08 g/dl

Age to buy alcohol
18 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
Yes

Are there separated cycle lanes?*

None



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
No

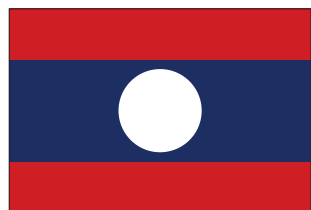
Is first aid training mandatory in secondary schools?
No



* Data gathered UNICEF

LAO PEOPLE'S DEMOCRATIC REPUBLIC

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	7.2 million
GNI per capita	US\$2,520
Country income group	Lower middle income

35.00%



Urban living

50.40%



Males

41.78%



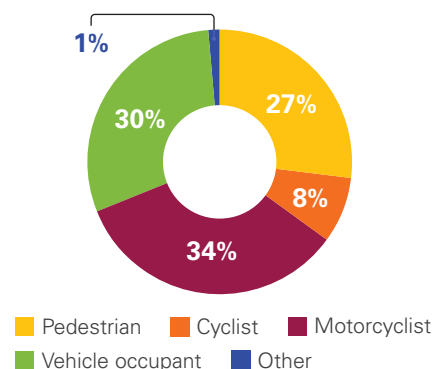
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

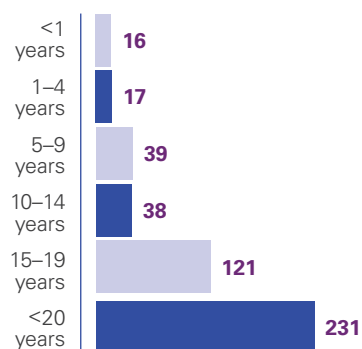
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	778
Road traffic deaths (n)	231
Rate per 100,000 population	7.80
% boys	70%
Years of healthy life lost to RTI-related disability	592

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

No

Is there a dedicated child injury prevention unit?

No



SPEEDING

Urban speed limit
40 km/hr

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

No



ALCOHOL

Blood alcohol content for drivers
<0.05 g/dl

Blood alcohol content for novice drivers
<0.05 g/dl

Age to buy alcohol
18 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
Yes

Are there separated cycle lanes?*

None



OCCUPANT RESTRAINTS

Is there a child restraint law?
Yes

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
Yes

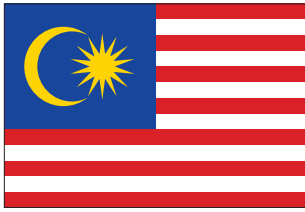
Is first aid training mandatory in secondary schools?
Yes



* Data gathered UNICEF

MALAYSIA

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	32.8 million
GNI per capita	US\$10,930
Country income group	Upper middle income

76.00%



Urban living

51.20%



Males

31.99%



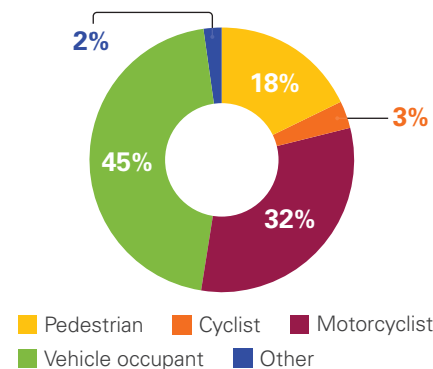
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

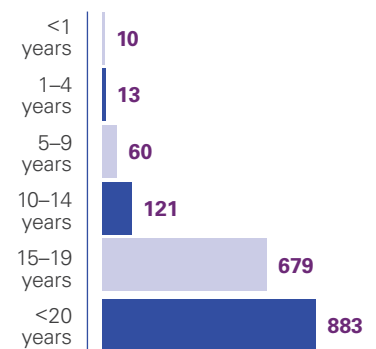
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	1,607
Road traffic deaths (n)	883
Rate per 100,000 population	8.47
% boys	83%
Years of healthy life lost to RTI-related disability	2,511

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

Yes

Is there a dedicated child injury prevention unit?

No



SPEEDING

Urban speed limit

90 km/hr

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

Yes (30 km/hr)



ALCOHOL

Blood alcohol content for drivers

<0.08 g/dl

Blood alcohol content for novice drivers

<0.08 g/dl

Age to buy alcohol

21 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?

No

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

Yes

Age child can sit in front seat

No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

Partial

Is first aid training mandatory in secondary schools?

Yes



* Data gathered UNICEF

MARSHALL ISLANDS

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	45 thousand
GNI per capita	US\$5,050
Country income group	Upper middle income

77.00%



Urban living

51.10%



Males

44.40%



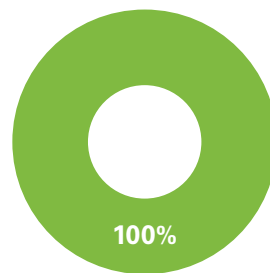
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

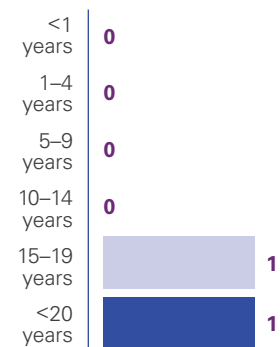
All injury deaths (n)	6
Road traffic deaths (n)	1
Rate per 100,000 population	5.42
% boys	63%
Years of healthy life lost to RTI-related disability	2

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
-
- Is there a dedicated child injury prevention unit?
-



SPEEDING

- Urban speed limit
-
- Can local authorities modify speed limits?
-
- Are speeds controlled around schools? *
-



ALCOHOL

- Blood alcohol content for drivers
-
- Blood alcohol content for novice drivers
-
- Age to buy alcohol
21 years



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
-
- Are children allowed on motorcycles?
-
- Are there separated cycle lanes? *
-



OCCUPANT RESTRAINTS

- Is there a child restraint law?
No
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
-



EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
-
- Is first aid training mandatory in secondary schools?
-



* Data gathered UNICEF

MICRONESIA (FEDERATED STATES OF)

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	1.11 lakhs
GNI per capita	US\$3,880
Country income group	Lower middle income

68.70%



Urban living

50.50%



Males

42.34%



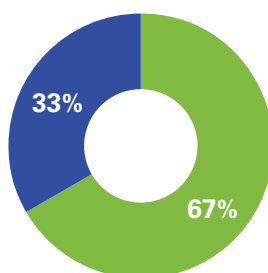
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

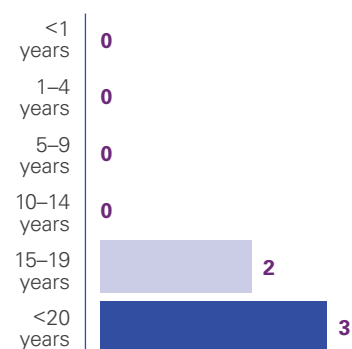
All injury deaths (n)	11
Road traffic deaths (n)	3
Rate per 100,000 population	6.20
% boys	62%
Years of healthy life lost to RTI-related disability	4

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

–

Is there a dedicated child injury prevention unit?

–



SPEEDING

Urban speed limit
40 km/hr

Can local authorities modify speed limits?

No

Are speeds controlled around schools?*

–



ALCOHOL

Blood alcohol content for drivers

–

Blood alcohol content for novice drivers

–

Age to buy alcohol

–



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

–



OCCUPANT RESTRAINTS

Is there a child restraint law?

No

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat

No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

–

Is first aid training mandatory in secondary schools?

–



* Data gathered UNICEF

MONGOLIA

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	3.2 million
GNI per capita	US\$3,760
Country income group	Lower middle income

68.40%



Urban living

49.70%



Males

38.71%



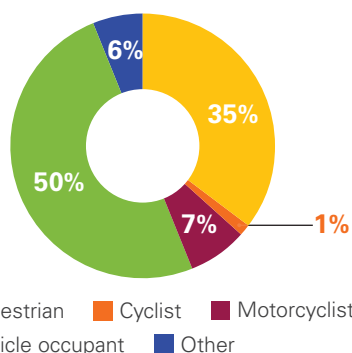
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

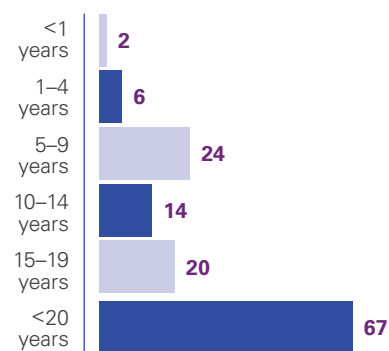
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	326
Road traffic deaths (n)	67
Rate per 100,000 population	5.42
% boys	66%
Years of healthy life lost to RTI-related disability	307

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?

Yes (Ministry of Road and Transport Development)



SPEEDING

Urban speed limit
60 km/hr

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

Yes (30 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.05 g/dl

Blood alcohol content for novice drivers
<0.05 g/dl

Age to buy alcohol
21 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
Yes

Is first aid training mandatory in secondary schools?
No



* Data gathered UNICEF

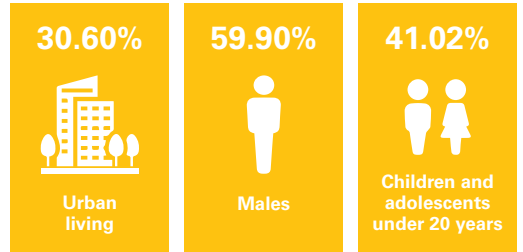
MYANMAR

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	44.09 million
GNI per capita	US\$1,140
Country income group	Lower middle income

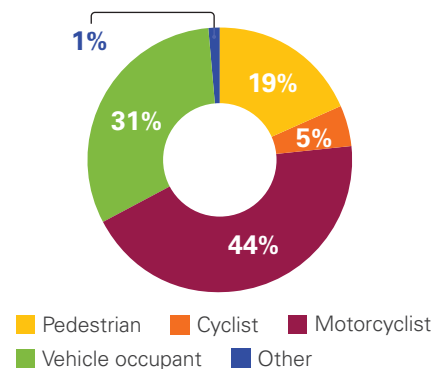


CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

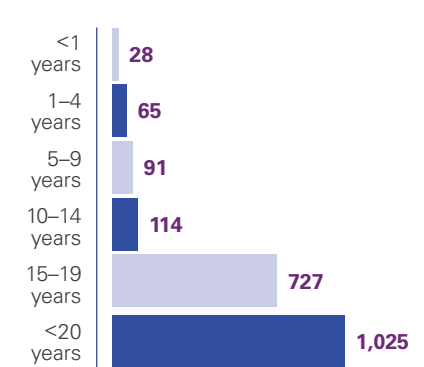
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	7,852
Road traffic deaths (n)	1,025
Rate per 100,000 population	5.14
% boys	78%
Years of healthy life lost to RTI-related disability	2,581

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?

Yes (Ministry of Labour, Immigration and Population)



SPEEDING

Urban speed limit
48 km/hr

Can local authorities modify speed limits?
No

Are speeds controlled around schools?*

Yes (30 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.08 g/dl

Blood alcohol content for novice drivers
<0.08 g/dl

Age to buy alcohol
18 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
No

Are there separated cycle lanes? *
Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

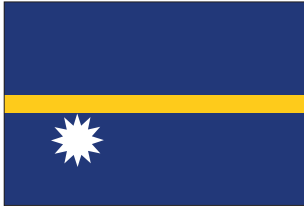
Is road safety part of the school curriculum?
No

Is first aid training mandatory in secondary schools?
No



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	12 thousand
GNI per capita	US\$19,470
Country income group	High income

44.80%



Urban living

50.00%



Males

—



Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

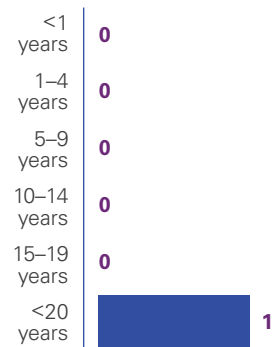
All injury deaths (n)	2
Road traffic deaths (n)	1
Rate per 100,000 population	11.38
% boys	37%
Years of healthy life lost to RTI-related disability	1

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
—
- Is there a dedicated child injury prevention unit?
—



SPEEDING

- Urban speed limit
—
- Can local authorities modify speed limits?
—
- Are speeds controlled around schools? *
—



ALCOHOL

- Blood alcohol content for drivers
—
- Blood alcohol content for novice drivers
—
- Age to buy alcohol
—



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
—
- Are children allowed on motorcycles?
—
- Are there separated cycle lanes? *
—



OCCUPANT RESTRAINTS

- Is there a child restraint law?
—
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
—



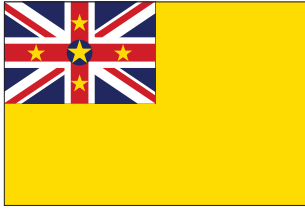
EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
—
- Is first aid training mandatory in secondary schools?
—



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	2 thousand
GNI per capita	–
Country income group	–

100.00%



Urban living

50.00%



Males

–



Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	0
Road traffic deaths (n)	0.04
Rate per 100,000 population	7.37
% boys	74%
Years of healthy life lost to RTI-related disability	0

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE

<1 years	0
1–4 years	0
5–9 years	0
10–14 years	0
15–19 years	0
<20 years	0

RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
–
- Is there a dedicated child injury prevention unit?
–



SPEEDING

- Urban speed limit
–
- Can local authorities modify speed limits?
–
- Are speeds controlled around schools?*



ALCOHOL

- Blood alcohol content for drivers
–
- Blood alcohol content for novice drivers
–
- Age to buy alcohol
–



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
–
- Are children allowed on motorcycles?
–
- Are there separated cycle lanes?*



OCCUPANT RESTRAINTS

- Is there a child restraint law?
–
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
–



EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
–
- Is first aid training mandatory in secondary schools?
–



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	18 thousand
GNI per capita	US\$14,390
Country income group	Upper middle income

79.90%



Urban living

50.00%



Males

22.20%



Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	1
Road traffic deaths (n)	0.23
Rate per 100,000 population	5.01
% boys	62%
Years of healthy life lost to RTI-related disability	0

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE

<1 years	0
1-4 years	0
5-9 years	0
10-14 years	0
15-19 years	0
<20 years	0

RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
-
- Is there a dedicated child injury prevention unit?
-



SPEEDING

- Urban speed limit
-
- Can local authorities modify speed limits?
-
- Are speeds controlled around schools? *
-



ALCOHOL

- Blood alcohol content for drivers **<0.10 g/dl**
- Blood alcohol content for novice drivers **<0.10 g/dl**
- Age to buy alcohol
-



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
-
- Are children allowed on motorcycles?
-
- Are there separated cycle lanes? *
-



OCCUPANT RESTRAINTS

- Is there a child restraint law?
-
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
-



EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
-
- Is first aid training mandatory in secondary schools?
-



* Data gathered UNICEF

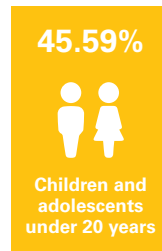
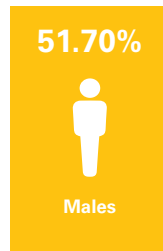
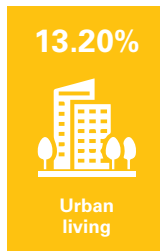
PAPUA NEW GUINEA

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	9.5 million
GNI per capita	US\$2,790
Country income group	Lower middle income

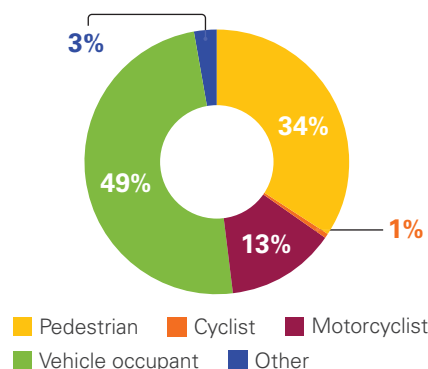


CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

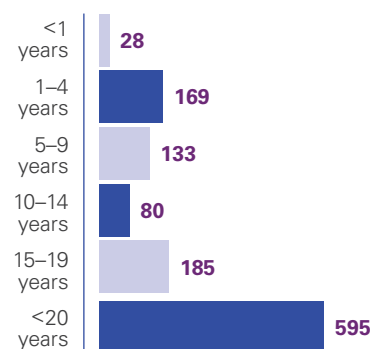
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	2,049
Road traffic deaths (n)	595
Rate per 100,000 population	12.80
% boys	80%
Years of healthy life lost to RTI-related disability	585

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
No

Is there a dedicated child injury prevention unit?
No



SPEEDING

Urban speed limit
60 km/hr

Can local authorities modify speed limits?
No

Are speeds controlled around schools?*

No



ALCOHOL

Blood alcohol content for drivers
-

Blood alcohol content for novice drivers
-

Age to buy alcohol
-



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
Yes

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
No

Is first aid training mandatory in secondary schools?
No



* Data gathered UNICEF

PHILIPPINES

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	110.3 million
GNI per capita	US\$3,640
Country income group	Lower middle income

46.90%



Urban living

50.70%



Males

40.88%



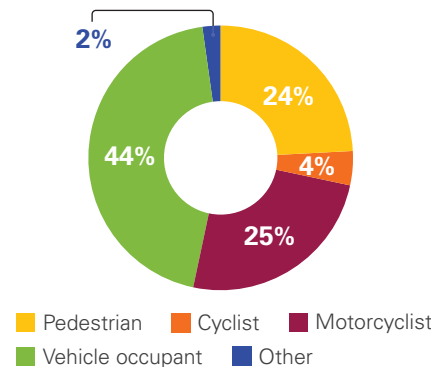
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

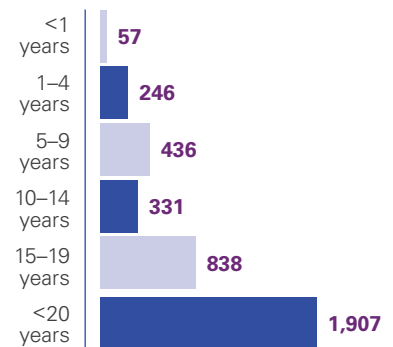
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	8,666
Road traffic deaths (n)	1,907
Rate per 100,000 population	4.12
% boys	71%
Years of healthy life lost to RTI-related disability	5,935

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

Yes

Is there a dedicated child injury prevention unit?

Yes (Department of Health)



SPEEDING

Urban speed limit
40 km/hr

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

Yes (20 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.05 g/dl

Blood alcohol content for novice drivers
<0.05 g/dl

Age to buy alcohol
18 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

Partial



OCCUPANT RESTRAINTS

Is there a child restraint law?

No

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat
7 years and above



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

Yes

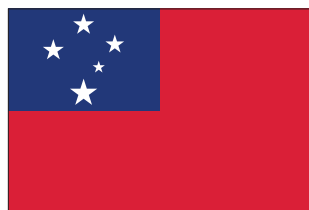
Is first aid training mandatory in secondary schools?

Yes



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	2.12 lakhs
GNI per capita	US\$3,860
Country income group	Lower middle income

18.20%



Urban living

50.90%



Males

47.64%



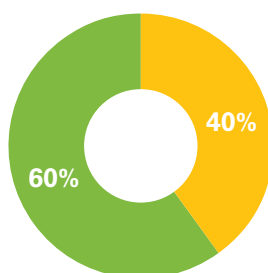
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

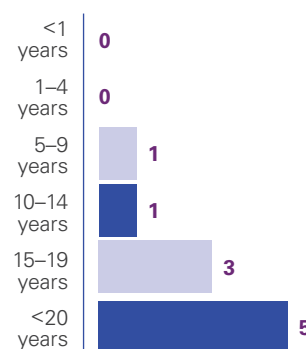
All injury deaths (n)	18
Road traffic deaths (n)	5
Rate per 100,000 population	4.91
% boys	66%
Years of healthy life lost to RTI-related disability	10

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
No

Is there a dedicated child injury prevention unit?
No



SPEEDING

Urban speed limit
56 km/hr

Can local authorities modify speed limits?
No

Are speeds controlled around schools?*

Yes (24 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.04 g/dl

Blood alcohol content for novice drivers
<0.04 g/dl

Age to buy alcohol
21 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
Yes

Are there separated cycle lanes?*

No



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
Yes

Is first aid training mandatory in secondary schools?
No



* Data gathered UNICEF

SOLOMON ISLANDS

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	6.75 lakhs
GNI per capita	US\$2,300
Country income group	Lower middle income

23.70%



Urban living

51.10%



Males

50.07%



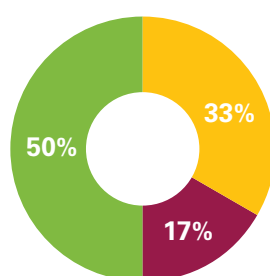
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

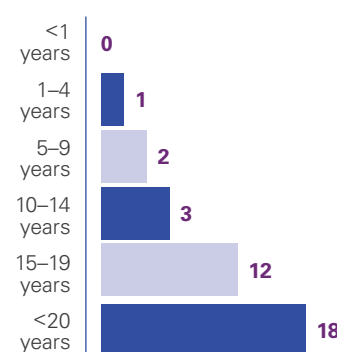
All injury deaths (n)	117
Road traffic deaths (n)	18
Rate per 100,000 population	5.60
% boys	72%
Years of healthy life lost to RTI-related disability	23

ROAD TRAFFIC INJURY BY USER



■ Pedestrian ■ Cyclist ■ Motorcyclist
■ Vehicle occupant ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

Yes

Is there a dedicated child injury prevention unit?

No



SPEEDING

Urban speed limit
40 km/hr

Can local authorities modify speed limits?

Yes

Are speeds controlled around schools?*

No



ALCOHOL

Blood alcohol content for drivers

–

Blood alcohol content for novice drivers

–

Age to buy alcohol

–



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

No



OCCUPANT RESTRAINTS

Is there a child restraint law?

No

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat

No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

No

Is first aid training mandatory in secondary schools?

No



* Data gathered UNICEF

THAILAND

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	71.3 million
GNI per capita	US\$7,260
Country income group	Upper middle income

49.90%



Urban living

48.70%



Males

22.35%



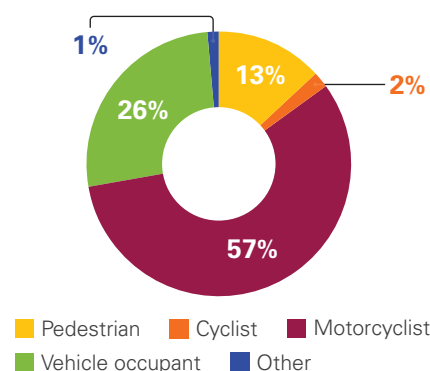
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

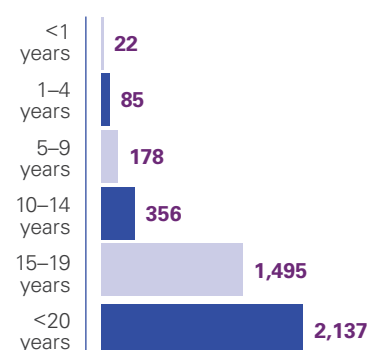
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	4,419
Road traffic deaths (n)	2,137
Rate per 100,000 population	14.28
% boys	77%
Years of healthy life lost to RTI-related disability	3,011

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

–

Is there a dedicated child injury prevention unit?

–



SPEEDING

Urban speed limit
80 km/hr

Can local authorities modify speed limits?

No

Are speeds controlled around schools?*

–



ALCOHOL

Blood alcohol content for drivers
<0.05 g/dl

Blood alcohol content for novice drivers
<0.05 g/dl

Age to buy alcohol
20 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

–



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?

Yes

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

–

Is first aid training mandatory in secondary schools?

–



* Data gathered UNICEF

TIMOR-LESTE

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	1.2 million
GNI per capita	US\$1,940
Country income group	Lower middle income

30.60%



Urban living

51.00%



Males

48.52%



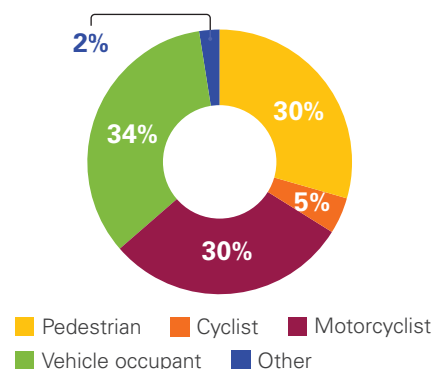
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

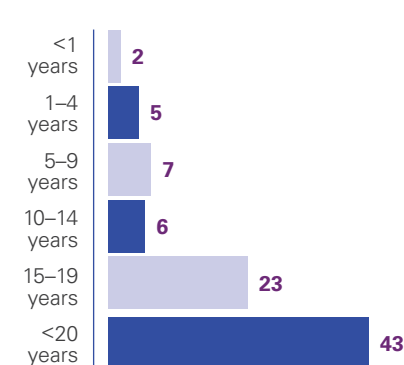
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	142
Road traffic deaths (n)	43
Rate per 100,000 population	6.40
% boys	72%
Years of healthy life lost to RTI-related disability	105

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?
Yes (Ministry of Health)



SPEEDING

Urban speed limit
50 km/hr

Can local authorities modify speed limits?
No

Are speeds controlled around schools?*

Yes (40 km/hr)



ALCOHOL

Blood alcohol content for drivers
<0.05 g/dl

Blood alcohol content for novice drivers
<0.05 g/dl

Age to buy alcohol
None



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?
Yes

Are there separated cycle lanes?*

None



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?
No

Age child can sit in front seat
Prohibited under 12 years



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?
No

Is first aid training mandatory in secondary schools?
No



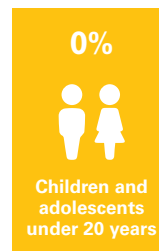
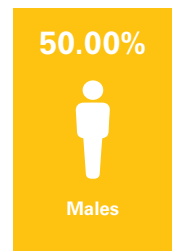
* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	2 thousand
GNI per capita	–
Country income group	–



CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	0
Road traffic deaths (n)	0.02
Rate per 100,000 population	3.43
% boys	53%
Years of healthy life lost to RTI-related disability	0

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE

<1 years	0
1–4 years	0
5–9 years	0
10–14 years	0
15–19 years	0
<20 years	0

RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

- Is child health a national priority?
–
- Is there a dedicated child injury prevention unit?
–



SPEEDING

- Urban speed limit
–
- Can local authorities modify speed limits?
–
- Are speeds controlled around schools?*



ALCOHOL

- Blood alcohol content for drivers
–
- Blood alcohol content for novice drivers
–
- Age to buy alcohol
–



MOTORCYCLES AND HELMETS

- Is there a motorcycle helmet law?
–
- Are children allowed on motorcycles?
–
- Are there separated cycle lanes?*



OCCUPANT RESTRAINTS

- Is there a child restraint law?
–
- Is there a child restraint standard?
No
- Do all new vehicles need ISOFIX anchorages?
No
- Age child can sit in front seat
–



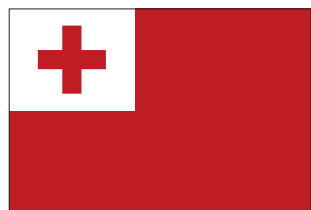
EDUCATION AND FIRST AID*

- Is road safety part of the school curriculum?
–
- Is first aid training mandatory in secondary schools?
–



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	1.05 lakhs
GNI per capita	US\$5,190
Country income group	Upper middle income

23.10%



Urban living

49.50%



Males

46.67%



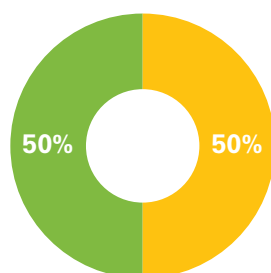
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

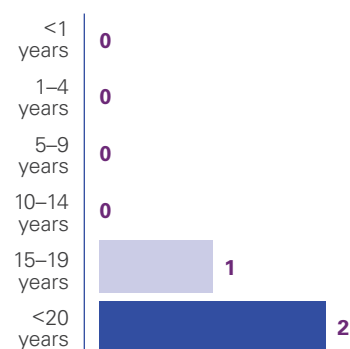
All injury deaths (n)	7
Road traffic deaths (n)	2
Rate per 100,000 population	3.84
% boys	76%
Years of healthy life lost to RTI-related disability	4

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

–

Is there a dedicated child injury prevention unit?

–



SPEEDING

Urban speed limit
50 km/hr

Can local authorities modify speed limits?

No

Are speeds controlled around schools?*

–



ALCOHOL

Blood alcohol content for drivers
<0.03 g/dl

Blood alcohol content for novice drivers
<0.03 g/dl

Age to buy alcohol

–



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

–



OCCUPANT RESTRAINTS

Is there a child restraint law?

No

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat

No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

–

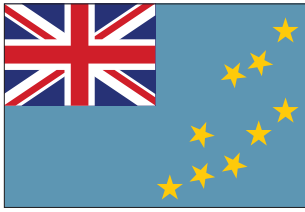
Is first aid training mandatory in secondary schools?

–



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	11 thousand
GNI per capita	US\$6,760
Country income group	Upper middle income

62.40%



Urban living

54.50%



Males

36.36%



Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	1
Road traffic deaths (n)	0.29
Rate per 100,000 population	6.27
% boys	65%
Years of healthy life lost to RTI-related disability	0

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
 ■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE

<1 years	0
1-4 years	0
5-9 years	0
10-14 years	0
15-19 years	0
<20 years	0

RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

No

Is there a dedicated child injury prevention unit?

No



SPEEDING

Urban speed limit

–

Can local authorities modify speed limits?

–

Are speeds controlled around schools?*

Yes (20 km/hr)



ALCOHOL

Blood alcohol content for drivers

–

Blood alcohol content for novice drivers

–

Age to buy alcohol

–



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

–

Are children allowed on motorcycles?

–

Are there separated cycle lanes?*

No



OCCUPANT RESTRAINTS

Is there a child restraint law?

–

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat

–



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

Yes

Is first aid training mandatory in secondary schools?

Yes



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	3.04 lakhs
GNI per capita	US\$3,140
Country income group	Lower middle income

25.30%



Urban living

50.30%



Males

49.67%



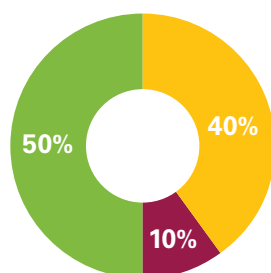
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

ROAD TRAFFIC DEATHS AND INJURIES

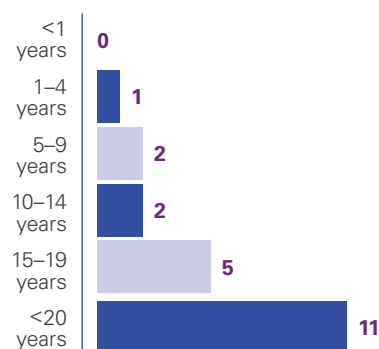
All injury deaths (n)	37
Road traffic deaths (n)	11
Rate per 100,000 population	7.57
% boys	65%
Years of healthy life lost to RTI-related disability	16

ROAD TRAFFIC INJURY BY USER



■ Pedestrian
 ■ Cyclist
 ■ Motorcyclist
■ Vehicle occupant
 ■ Other

ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?

No

Is there a dedicated child injury prevention unit?

No



SPEEDING

Urban speed limit

–

Can local authorities modify speed limits?

–

Are speeds controlled around schools?*

Yes (30 km/hr)



ALCOHOL

Blood alcohol content for drivers

No legislation

Blood alcohol content for novice drivers

No legislation

Age to buy alcohol

No



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?

Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

No



OCCUPANT RESTRAINTS

Is there a child restraint law?

No

Is there a child restraint standard?

No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat

Allowed in child restraint



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

No

Is first aid training mandatory in secondary schools?

No



* Data gathered UNICEF

COUNTRY OVERVIEW^{1, 2, 3, 4}



POPULATION (2019)

Total population	95.7 million
GNI per capita	US\$3,560
Country income group	Lower middle income

35.90%



Urban living

49.40%



Males

30.09%



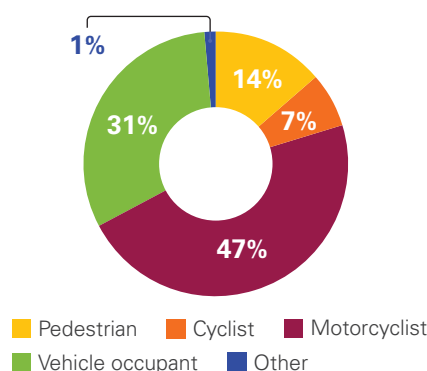
Children and adolescents under 20 years

CAUSES OF DEATH AND INJURY AMONG UNDER 20 YEAR OLDS IN 2019⁵

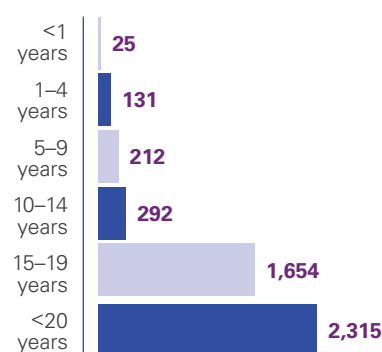
ROAD TRAFFIC DEATHS AND INJURIES

All injury deaths (n)	6,818
Road traffic deaths (n)	2,315
Rate per 100,000 population	7.94
% boys	75%
Years of healthy life lost to RTI-related disability	986

ROAD TRAFFIC INJURY BY USER



ROAD TRAFFIC INJURY BY AGE



RESPONSE AND COUNTRY POLICIES^{6, 7, 8}

LEADERSHIP*

Is child health a national priority?
Yes

Is there a dedicated child injury prevention unit?

Yes (Ministry of Labour, Invalid and Social Affairs)



SPEEDING

Urban speed limit
60 km/hr

Can local authorities modify speed limits?

No

Are speeds controlled around schools?*

Yes



ALCOHOL

Blood alcohol content for drivers
0 g/dl

Blood alcohol content for novice drivers
0 g/dl

Age to buy alcohol
18 years



MOTORCYCLES AND HELMETS

Is there a motorcycle helmet law?
Yes

Are children allowed on motorcycles?

Yes

Are there separated cycle lanes?*

No



OCCUPANT RESTRAINTS

Is there a child restraint law?
No

Is there a child restraint standard?
No

Do all new vehicles need ISOFIX anchorages?

No

Age child can sit in front seat
No age restrictions



EDUCATION AND FIRST AID*

Is road safety part of the school curriculum?

Yes

Is first aid training mandatory in secondary schools?

Yes



* Data gathered UNICEF

Appendix

Sources of data for country profiles

1. <https://population.un.org/wpp/Download/Standard/Population/>
2. <https://population.un.org/wup/Download/>
3. <https://data.worldbank.org/indicator/NY.GNP.PCAP.CD>
4. <https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html#:~:text=The20%World20%Bank20%classifies20%economies20%for20%analytical20%purposes,which20%is20%applied20%to20%smooth20%exchange20%rate20%fluctuations>
5. <https://ghdx.healthdata.org/gbd2019->
6. <https://www.who.int/publications/i/item/9789241565684>
7. <https://www.who.int/publications/i/item/9789241565639>
8. <https://unece.org/fileadmin/DAM/trans/main/wp29/wp29regs/2018/ECE-TRANS-WP-343-29Rev.26.pdf>

UNICEF East Asia and Pacific Regional Office

19 Phra Atit Road Bangkok 10200 Thailand

Email: eapro@unicef.org

www.unicef.org/eapro

© UNICEF, May 2023

