BHUTAN

ROAD SAFETY PROFILE

Supported by:

The ATO road safety profiles offer insights into the road safety in 37 Asia-Pacific countries by utilizing road safety related data from various sources and policy information extracted from a range of documents.

These road safety profiles were developed by the Asian Transport Observatory in collaboration with the Asia Pacific Road Safety Observatory (APRSO) and the International Road Federation (IRF). This September 2025 edition updates the February 2025 release—prepared for the Global Ministerial Conference on Road Safety in Marrakech—to inform discussions at the Asia-Pacific Regional Road Safety Conference in Manila.

Country Summary

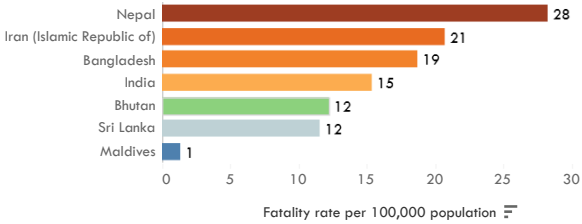
Bhutan, a small Himalayan kingdom, has made significant strides in recent years, particularly in its development trajectory. However, road safety remains a pressing concern. Despite improvements, the nation still grapples with considerable road traffic fatalities. In 2021, Bhutan experienced an estimated 95 deaths from road crashes as estimated by the World Health Organization (WHO), with road crash-related injuries accounting for 1.6% of all deaths in the country.

Population (2024)
792 Thousand

WHO (estimate) road crash fatalities for Year 2021
95 deaths

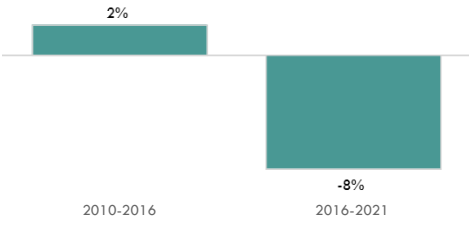
The country report to WHO recorded 71 deaths in 2021

WHO estimated road crash fatality rate in Bhutan compared to other countries in South Asia (2021)



(WHO estimated, 2023)

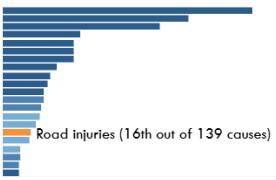
Annual average growth rate of road crash fatalities



(WHO estimated, 2023)

The country report to WHO recorded 9.2 deaths per 100,000 population in 2021

Causes of mortalities in Bhutan (2021)



(IHME, 2024)

A notable challenge in understanding the true extent of the problem lies in data discrepancies. While the WHO estimates approximately 95 fatalities in 2021, the numbers reported by country statistics are slightly lower at 71. This discrepancy underscores the need for more accurate and consistent data collection and reporting.

Road crash fatality rate, by source

WHO (estimate) for Year 2021
12.2 per 100,000 population

WHO (country-report) for Year 2021
9.2 per 100,000 population

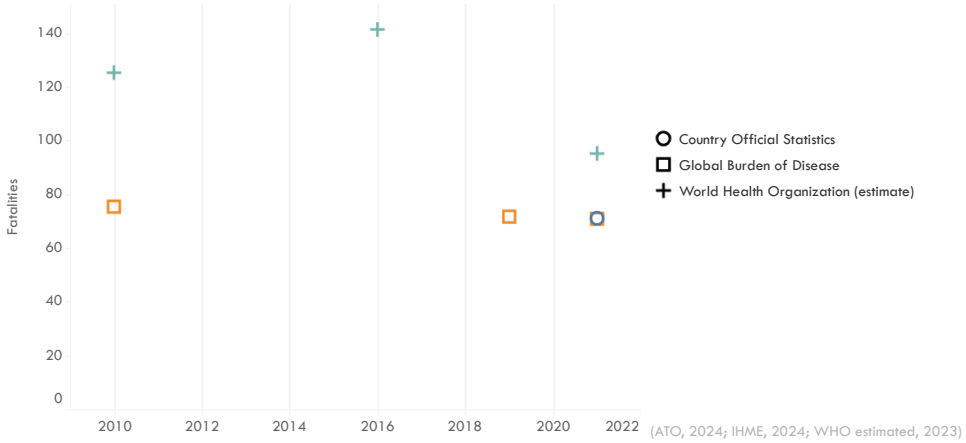
Country official statistics for Year 2024
12.2 per 100,000 population

GBD estimate for Year 2021
9.1 per 100,000 population

Every 1 day, someone dies in a road crash in Bhutan

(WHO estimated, 2023)

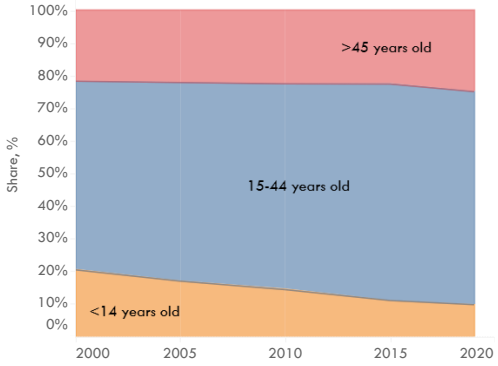
Road crash fatalities, by source



(ATO, 2024; IHME, 2024; WHO estimated, 2023)

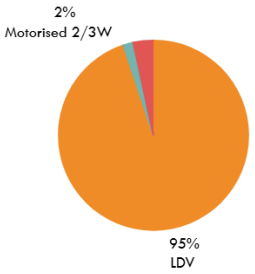
A deeper dive into the data reveals some valuable insights. The share of female fatalities in road crashes only slightly decreased from 30% to 29% between 2015 and 2021. Thee share of vulnerable road users, such as pedestrians and cyclists, remains low at 5%. Additionally, the proportion of fatalities among minors (<14 years old) and seniors (>65 years old) is slightly decreasing.

Road crash fatalities, share by age group



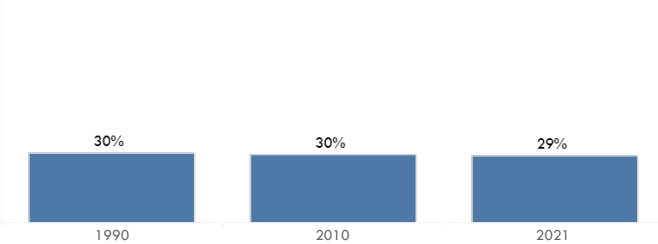
(IHME, 2021)

Road crash fatalities, share by road user



(Country report to WHO, 2023)

Share of female road crash fatalities



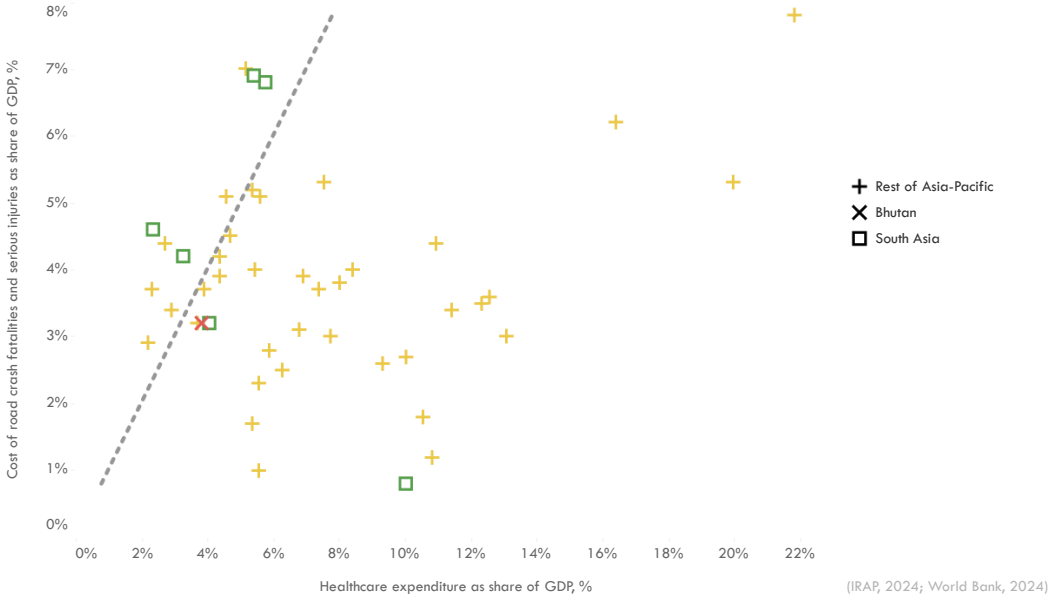
The country report to WHO indicates that women made up 79% of total road crashes deaths in 2021

(IHME, 2024)

The human cost of road accidents is immense, but the economic toll is equally significant. In 2021, road crashes cost Bhutan approximately 79 million USD. This includes direct costs such as medical expenses and property damage, as well as indirect costs such as lost productivity and pain and suffering. The high economic burden underscores the importance of investing in road safety measures.

Cost of road crash fatalities and serious injuries (2021)
79 Million USD

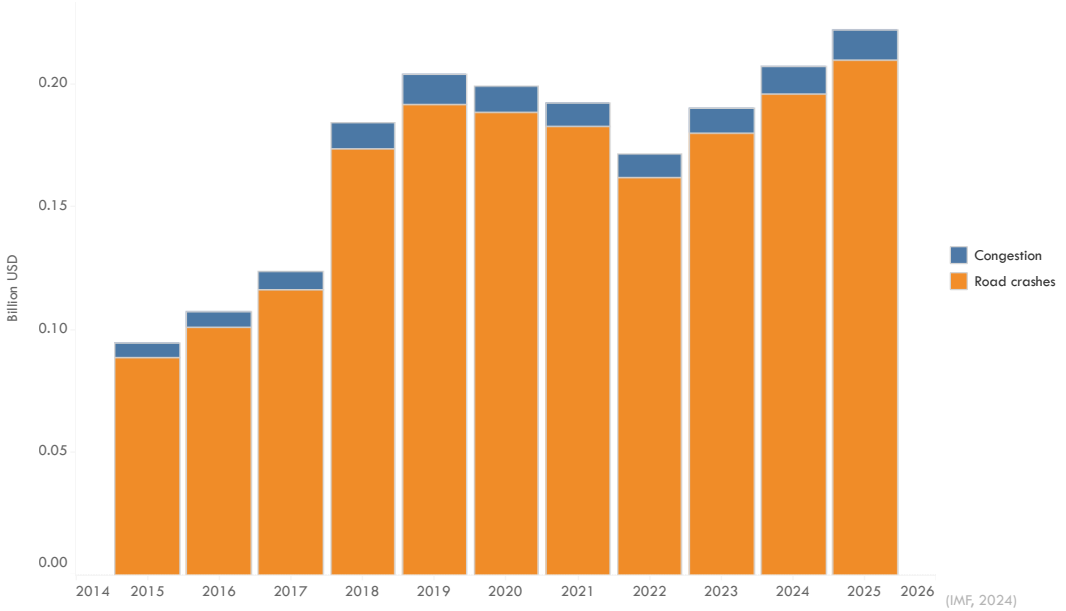
Cost of road crash fatalities and serious injuries vs. country healthcare expenditure as share of GDP (2021)



(IRAP, 2024; World Bank, 2024)

Road crashes constitute about 94% of the total implicit costs due to fossil fuel subsidies in transport. IRAP estimates that an annual invesment of 25 million USD, or just about 1.0% of Bhutan's GDP, could potentially save about 0 fatalities per year.

External costs to the society due to fossil fuel subsidies in transport



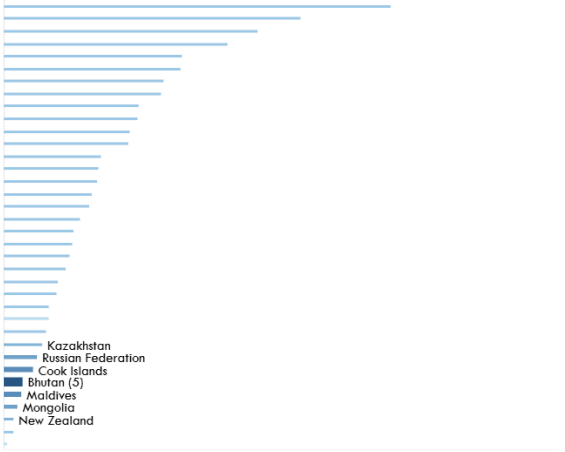
(IMF, 2024)

Despite low road crash fatality rate per thousand road kilometers, Bhutan's road infrastructure, particularly for pedestrians and cyclists, lags behind the Asia-Pacific average. The low IRAP ratings for these vulnerable road users indicate a significant infrastructure design and implementation gap.

Road availability (2021)
23.5 kilometers per thousand population

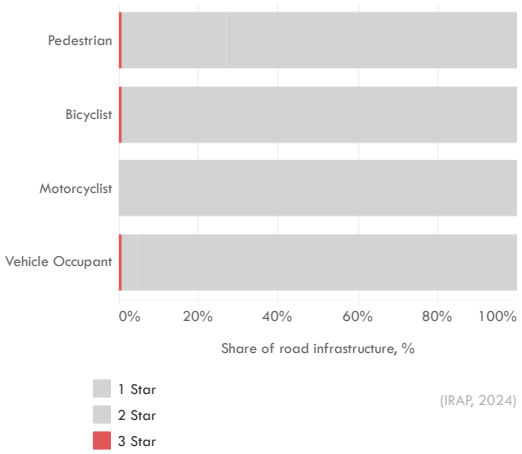
Length of road assessed by IRAP (as of 2024)
1,388 kilometers

Road crash fatalities per thousand kilometers (2021)



(WHO estimated, 2023; Nirandjan, et al., 2022)

Share of road infrastructure with 3-star or better safety rating, by road user category (2024)



(IRAP, 2024)

The increasing motorization rate in Bhutan, particularly the rise in two-wheelers and light-duty vehicles, poses additional risks. The high fatality rate per 100,000 registered vehicles underscores the need for stricter enforcement of traffic rules and improved driver education.

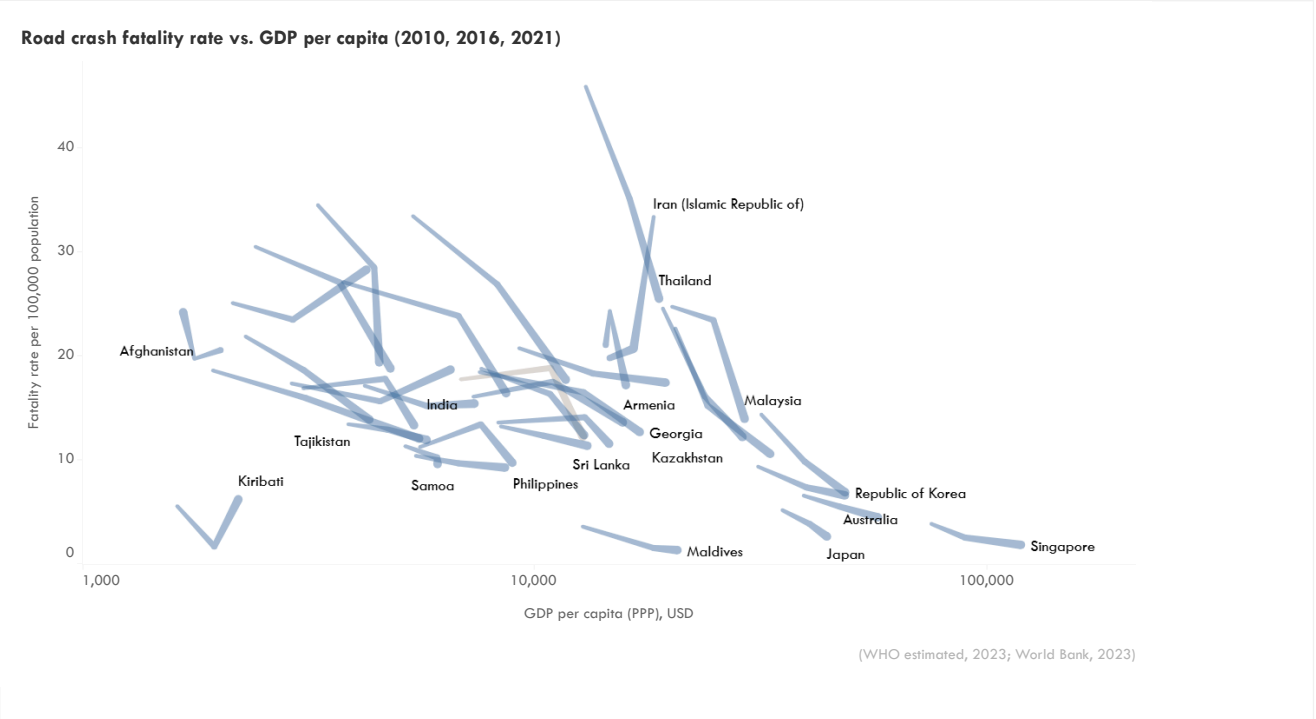
Motorization rate (2022)
131 vehicles per thousand population

Vehicle share by type (2022)

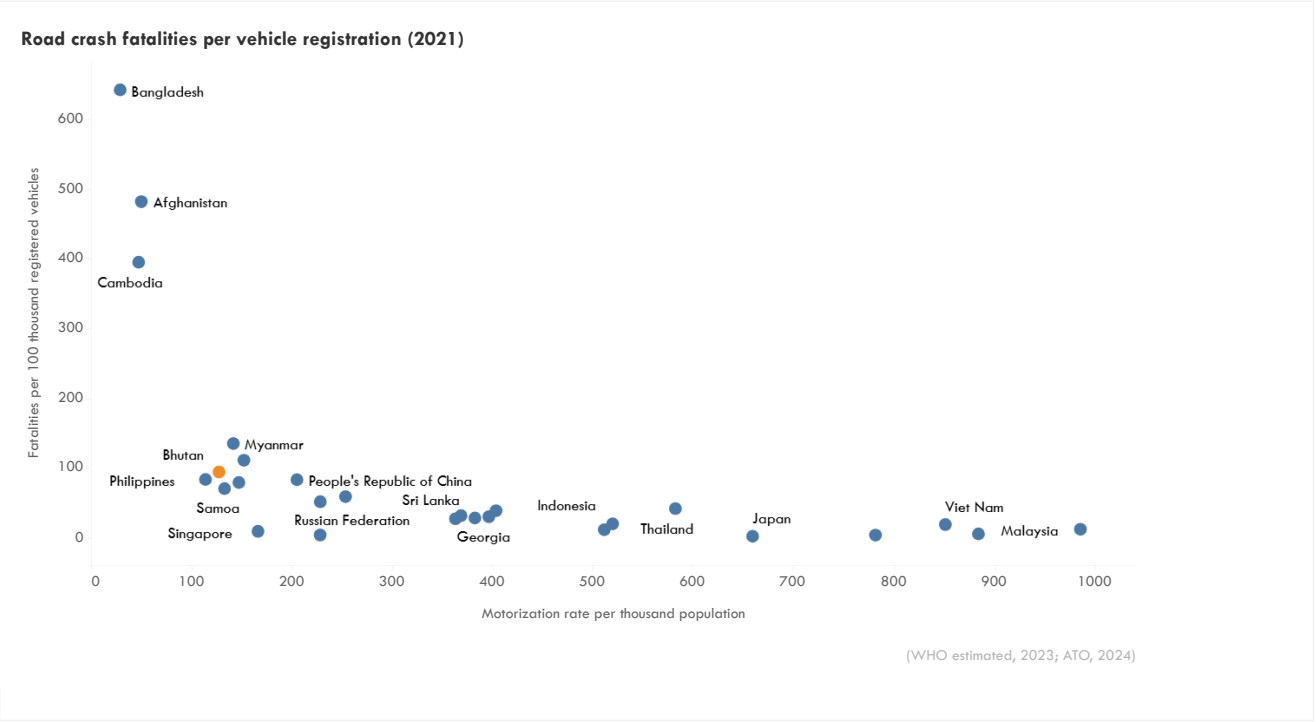
(ATO, 2024)

Benchmarking

The road traffic crash fatality rate in Bhutan for the year 2021 was 12.2 per 100,000 population. Compare this with Asia-Pacific average of 15.2 deaths per 100,000 population or against South Asia average of about 16.1, in the same year. WHO estimates the fatalities in Bhutan changing from 17.7 in 2010 to 12.2 fatalities per 100,000 population in 2021, equivalent to a -31% decrease. During this period, Asia-Pacific experienced an improvement of about -19% while South Asia also decreased by -10%

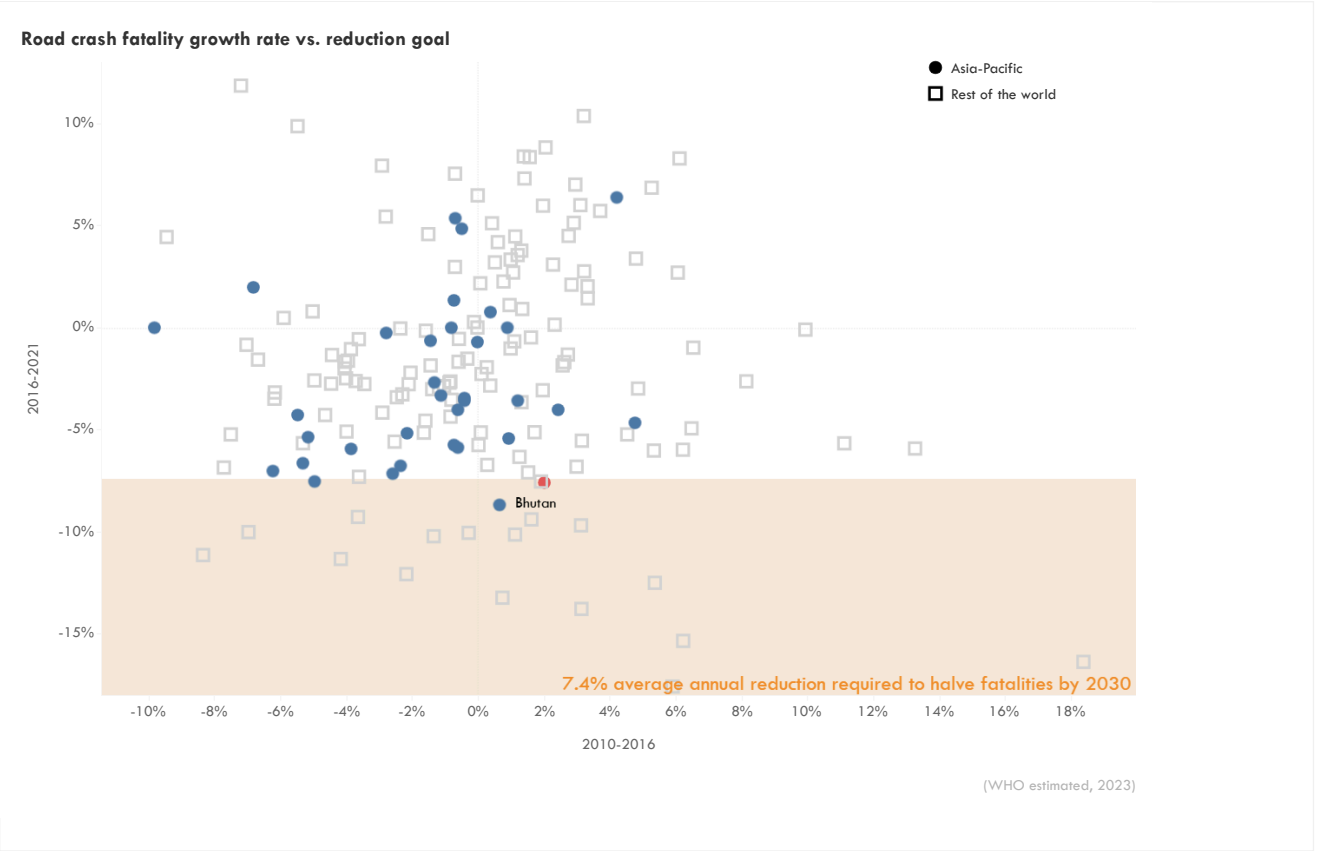


Bhutan had about 96 fatalities per 100 thousand registered vehicles.



Can Asia meet the 2030 target of halving fatalities?

- **Urgent action needed to reduce road fatalities** The Decade of Action for Road Safety 2021-2030 aims to cut road fatalities in half by 2030. An annual reduction of at least 7.4% is necessary to achieve this.
- **Asia-Pacific region falling behind** Despite reaching a peak in road crash fatalities, the Asia-Pacific region is not on track to meet the 2030 goal. The average annual reduction in deaths between 2016 and 2021 was only 0.6%, far below the required rate.
- **Varying progress across Asia** Using the 2016-2021 road crash fatality growth rate as a basis for estimates until 2030:
  - Only 3 Asian countries are projected to achieve the 50% reduction target by 2030.
  - 18 Asian countries are expected to reduce fatalities by at least 25%.
  - Worryingly, 7 Asian countries will continue to increase road fatalities, moving further away from the target.
- In Bhutan, road crash fatalities decreased by approximately -7.6% per year between 2016 and 2021. Bhutan will be able to halve its road crash fatalities by 2030



Policy Landscape

Bhutan has firmly committed to improving road safety by aligning itself with the global Decade of Action for Road Safety 2021-2030. Bhutan has a target of road crash fatality reduction indicating road fatality reduced to 8 per 10,000 vehicles. Bhutan has a robust policy framework in place to address road safety. The National Transport Policy 2017 and the 12th Five Year Plan 2018-23 outline various strategies to improve road safety, including infrastructure development, vehicle safety standards, and driver education. However, effective implementation and enforcement remain crucial.

Targets to reduce road crash fatalities or injuries	Target year	Document	Year published
Annual road fatality reduced per 10,000 vehicles = 8 (12 - 2017)	0	12th Five Year Plan 2018-23	2019

Measure type	Other targets with indirect benefits to road safety	Target year	Document	Year published
Active transport infrastructure expansion	• >75% of urban road should be covered with dedicated NMT tracks Construct min. 10 km of footpath every year	2050	Low Emission Development Strategy (LEDS) - Surface Transport	2021
Bike sharing	Launch PBS system in Thimphu city	2025	Low Emission Development Strategy (LEDS) - Surface Transport	2021
General active mobility	• 18,515 public bicycles by 2050 • 1,850 docking stations by 2050	2050	Low Emission Development Strategy (LEDS) - Surface Transport	2021
General land use	• Establish minimum 1 neighbourhood node with basic amenities and facilities close to growing cities - Thimphu, Paro, Phuentsholing, and Samtse	2050	Low Emission Development Strategy (LEDS) - Surface Transport	2021

General parking measures	• Develop and implement parking ‘de-growth’ plan in consonance with target of no more than 5,500 new vehicles per year, post 2030, permitted to register • Achieve 50% of parking ‘de-growth’ in preparation for gradual phasing out ICE passenger vehicles • 100% parking slots with parking turnover more than 5 in major urban areas should be digitised by 2030	2030	Low Emission Development Strategy (LEDS) - Surface Transport	2021
General public transport	Frequency of urban transport services during rush hours increased = 10 mins (15 mins - 2017) Low/zero carbon emission vehicle penetration/ uptake increased = 0.04% (0.01% - 2017) Towns with urban transport system introduced = 4 (3 - 2017) Gewogs connected by public transport services = 153 (2017 - 148) Increase in public transport ridership = 10% (1.07% - 2017)	2023	12th Five Year Plan 2018-23	2019
General public transport	• 314 intra-city and 358 inter_x0002_city buses. • Out of the 314 intra-city buses, 96 BRT Buses to be deployed on 126 km route. The remaining buses would operate as conventional bus systems on secondary routes.	2050	Low Emission Development Strategy (LEDS) - Surface Transport	2021
Measures to increase car occupancy	Improve vehicle occupancy in light vehicles and taxis by 50% and 25% respectively by 2035	2035	Low Emission Development Strategy (LEDS) - Surface Transport	2021
Target - Modal shift	• 25% modal shift for short (<3.5 km) trips from light vehicle, 2-W, and taxis to bicycling by 2040 50% modal shift for short (<2 km) trips from light vehicle, 2-W and taxis to walking by 2040	2040	Low Emission Development Strategy (LEDS) - Surface Transport	2021
Technology and knowledge transfer	100% of traffic signals in large urban areas should have smart CCTV systems by 2040	2040	Low Emission Development Strategy (LEDS) - Surface Transport	2021
Vehicle restrictions (import, age, access, sale, taxation)	Phase out import of ICE passenger vehicles after 2030 Cap annual import of 2- wheelers and light vehicles at 700 numbers and 5,500 numbers respectively after 2030	2035	Low Emission Development Strategy (LEDS) - Surface Transport	2021
Vehicle restrictions (import, age, access, sale, taxation)	Private vehicle demand management through shared mobility, traffic system management carpooling, ride sharing and rental services, import restriction on internal combustion engine cars from 2030 and introducing annual import quota system.	2030	Second Nationally Determined Contribution - BTN	2021

Policy measures with indirect benefit to road safety

References

ATO. National Database (2024). **https://asiantransportoutlook.com/snd/**

IMF. (2024). Climate Data. **https://climatedata.imf.org/pages/access-data**

Institute for Health Metrics and Evaluation. (2021). GBD Results. GBD Results. **https://vizhub.healthdata.org/gbd-results**

Institute for Health Metrics and Evaluation. (2024). Global Burden of Disease Study 2021 (GBD 2021) Cause-Specific Mortality 1990-2021. **https://ghdx.healthdata.org/record/ihme-data/gbd-2021-cause-specific-mortality-1990-2021**

iRAP. (2024). Safety Insights Explorer. iRAP. **https://irap.org/safety-insights-explorer/**

Nirandjan, S., Koks, E. E., Ward, P. J., & Aerts, J. C. J. H. (2022). A spatially-explicit harmonized global dataset of critical infrastructure. Scientific Data, 9(1), 150. **https://doi.org/10.1038/s41597-022-01218-4**

United Nations Department of Economic and Social Affairs Population Division. (2022). World Population Prospects 2022. **https://population.un.org/wpp/**

WHO. (2023). Global Status Report on Road Safety 2023. **https://www.who.int/teams/social-determinants-of-health/safety-and-mobility/global-status-report-on-road-safety-2023**

World Bank. (2023). GDP, PPP (current international $). World Bank Open Data. **https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD**

World Bank. (2024). Current health expenditure (% of GDP). World Bank Open Data. **https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS**