

EVIDENCE-BASED INTERVENTION TALKING POINTS

30 KM/H (20 MPH) ZONES



What we mean by it¹

Road environments designed to reduce vehicle speeds to 30 km/h (20 mph) or lower. This is achieved through 30 km/h (20 mph) posted speed limits, supported by speed enforcement, traffic calming measures, and pedestrian facilities to ensure the safety of pedestrians, cyclists, and motorcyclists.

Where we need it

Areas where pedestrians need to cross or walk along the road, where vehicles enter and drive through a built-up area, or where pedestrians, cyclists, or motorcyclists are present. In practice, this would include residential areas, villages, markets, retirement villages, school zones, healthcare and hospital precincts, around places of worship, university hubs, public transport hubs and major train station zones, city centers, and central business districts (CBD).

and/or

Areas where deaths or serious injuries occur among pedestrians, cyclists, or motorcyclists from road crashes.

Key asks

- Set speed limits of 30 km/h or lower in areas where people walk, bike, live, and play
- Implement policy or law to make 30 km/h the default speed limit on streets in residential, public transport, commercial, health, educational, religious, and recreational areas
- Ensure speed zoning guidelines enable a broader introduction of 30 km/h zones²
- Install 30 km/h speed limit signs with traffic calming measures and pedestrian facilities

¹Our definition is based on the following source: [Turner, B., Job, S., & Mitra, S. \(2021\). Guide for Road Safety Interventions: Evidence of What Works and What Does Not Work. World Bank, Washington, DC., USA.](#)

² In many countries guidelines direct where and how to apply the speed limit. Speed zoning guidelines may exist in addition to relevant speed limit laws or may exist without speed limit law.

Why we need it

Linkage to key global road safety documents

The extensive linkage between 30 km/h (20 mph) zones and the recommendations set out in existing key global road safety documents give more weight as to why this intervention ought to be implemented. Governments are able to demonstrate that they are putting recommended best practice into real practice when they implement the 30 km/h (20 mph) zones.

Implementing 30 km/h zones achieves, supports, and/or promotes the implementation of:

- 16 recommended actions in the Global Plan;
- 3 of the Global Road Safety Performance Targets;
- 14 statements in the Stockholm Declaration;
- 8 recommendations of the Academic Expert Group of the 3rd Ministerial Conference on Global Road Safety;
- 11 interventions across 3 components in the Save LIVES package;
- 10 commitments in A/RES/76/294, the Political Declaration of the High-Level Meeting on Improving Global Road Safety.

To reduce deaths and injuries

30 km/h zones help countries achieve the Global Plan target

The Global Plan for the Decade of Action for Road Safety 2021–2030 (Global Plan)³ sets a target to reduce road traffic deaths and injuries by 50% by 2030. Achieving this target requires implementation of evidence-based interventions that are known to reduce road traffic deaths and injuries. 30 km/h zones are one such evidence-based intervention.

30 km/h zones address the large proportion of global deaths

Over 50% of road traffic deaths globally occur among pedestrians, cyclists, and motorcyclists (vulnerable road users).⁴

30 km/h zones protect road users that do not have any/substantial protection against the raw forces of crashes

Higher travel speeds are particularly harmful to pedestrians, cyclists, and motorcyclists because they do not have any/substantial protection against the raw forces of crashes (such as crush zones, airbags, and seat belts that are found in motor vehicles). Therefore, they are significantly more likely to die or sustain serious injuries at the same impact speed compared to vehicle occupants. For example, there is a 40% chance of a pedestrian dying if hit by a car traveling at 50 km/h as opposed to a 13% chance at 30 km/h.⁵ Speed limits less than or equal to 30 km/h also reduce the risk of injury and death of vehicle occupants.⁶

³World Health Organization. (2021). *Global Plan for the Decade of Action for Road Safety 2021-2030*.

⁴World Health Organization. (2018). *Global status report on road safety 2018*. Geneva.

⁵Sharpin, A.B, Adriaola-Steil, C., Job, S., et al. (2021). *Low-Speed Zone Guide*. World Resources Institute and The Global Road Safety Facility.

⁶Karndacharuk, A. & McTiernan, D. (2019). *Implementation Principles for 30 km/h Speed Limits and Zones*. *Journal of Road Safety*, 30(2), 45–54.

Neki, K., Lumumba, M., Mitra, S., & Job, S. (2021). *Economic impact of 30km/h – Benefits and Costs of Speeds in an urban environment*. *Journal of Road Safety*, 32(3), 49–51.

30 km/h zones allow road users to make less errors

At 30 km/h, a driver has a larger field of vision, improving their ability to quickly predict or detect potential conflicts on the road. It also takes less distance for a vehicle to stop. This prevents the vehicle colliding with a pedestrian, cyclist, or another vehicle (Figure 1), leading to a reduction in crashes between pedestrians and motor vehicles by as much as 28% and in injuries and fatalities by as much as 67%.⁷

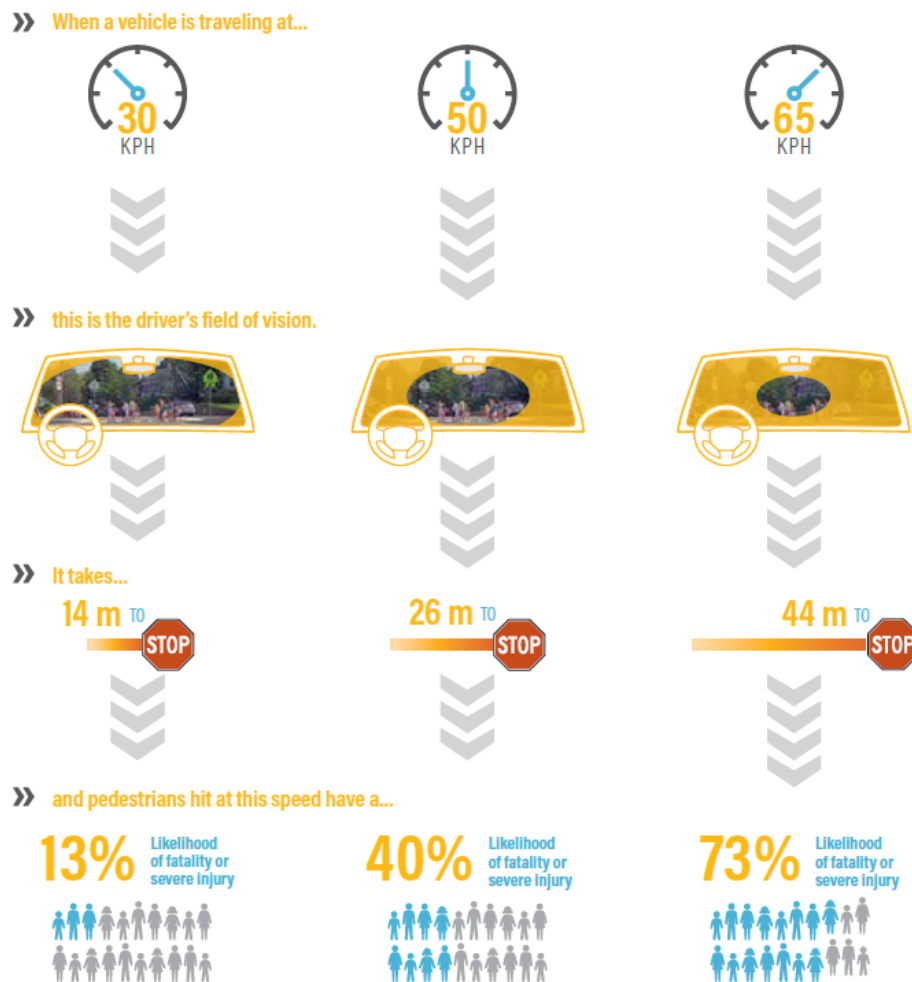


Figure 1: Vehicle Speed and Pedestrian Survivability

Source: World Resources Institute and Global Road Safety Facility⁸ reproduced under Creative Commons Attribution 4.0 International License

⁷ Fridman, L., Ling, R., Rothman, L., et al. (2020). Effect of reducing the posted speed limit to 30 km per hour on pedestrian motor vehicle collisions in Toronto, Canada - a quasi experimental, pre-post study. BMC Public Health 20, 56.

⁸ Sharpin, A.B., Adriazola-Steil, C., Job, S., et al. (2021). Low-Speed Zone Guide. World Resources Institute and The Global Road Safety Facility.

To implement a Safe System approach

The implementation of 30 km/h zones demonstrates the adoption of the Safe System approach. The Safe System approach is a human-centric approach which dictates the design, use, and operation of our road transport system to protect the human road users.⁹

A Safe System approach means any road safety intervention ought to ensure that the impact speed remains below the threshold likely to result in death or serious injury in the event of a crash. Typically, the impact speed must remain below 30 km/h for a pedestrian hit by a vehicle.¹⁰ 30 km/h zones protect pedestrians, cyclists, and motorcyclists.

History shows that countries that have adopted the Safe System approach implement evidence-based interventions, such as 30 km/h zones, and tend to have the lowest rate of fatality per population and the fastest rate of reduction in fatality numbers.¹¹

For economic benefits

30 km/h zones reduce costs for government, individuals, and businesses

30 km/h zones save lives and reduce the severity of crash injuries, thereby reducing economic costs and positively contributing to a country's economic growth. The economic costs related to injury and loss of life from traffic crashes include the money needed to treat injuries, loss of hours worked, vehicle repair costs, insurance or third-party costs, and the costs caused by increased congestion when a crash occurs.

30 km/h zones can contribute to increasing GDP

A [World Bank study](#) highlighted that halving road crash deaths and injuries could generate additional flows of income, with increases in GDP per capita over 24 years as large as 7.1% in Tanzania, 7.2% in the Philippines, 14% in India, 15% in China, and 22.2% in Thailand.¹²

For co-benefits

30 km/h zones promote walking, cycling, public transport, and related health benefits

30 km/h zones facilitate and promote environmentally friendlier and more active modes of transport, such as walking, cycling, and public transportation, freeing up more space for urban recreation, commerce, and outdoor activities, improving physical and mental health, and creating vibrant cities with better livability.¹³

30 km/h zones can reduce emissions

30 km/h zones reduce carbon dioxide and nitrous oxide emissions from diesel cars, and particulate matter emission from both diesel and petrol cars, thus reducing air pollution.¹⁴

⁹ [World Road Association. \(2019\). The Safe System Approach - Road Safety Manual: A Manual for Practitioners and Decision Makers on Implementing Safe System Infrastructure.](#)

¹⁰ [International Transport Forum. \(2008\). Towards Zero: Ambitious Road Safety Targets and the Safe System Approach, OECD Publishing, Paris.](#)

¹¹ [Welle, B., Sharpin, A.B., Adriaola-Steil, C., Job, S., Shotten, M., Bose, D., Bhatt, A., Alveano, S., Obelheiro, M., & Imamoglu, C.T. \(2018\). Sustainable & Safe: A Vision and Guidance for Zero Road Deaths. World Resources Institute.](#)

¹² [World Bank. \(2017\). The High Toll of Traffic Injuries: Unacceptable and Preventable. World Bank](#)

¹³ [Global Designing Cities Initiative. \(2016\). Global Street Design. Island Press; 2nd None ed. edition.](#)

¹⁴ [Williams, D. & North, R. \(2013\). An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London. Transport and Environmental Analysis Group, Centre for Transport Studies, Imperial College London.](#)

30 km/h zones can reduce traffic congestion

30 km/h speed limits can be beneficial in improving traffic flow and reducing congestion. Reductions in speed limits as vehicles reach congested conditions result in a smoother flow of traffic and less stop/start traffic movement.¹⁵ At lower speed limits, the following distance between vehicles can be shorter (as cars need less distance to stop than at higher travel speeds), and there is improved merging of vehicles from the side streets. This allows the road to accommodate a larger number of vehicles traveling at a constant speed, thereby reducing congestion and improving travel times.¹⁶ The crash reduction benefits of lower speed limits also improve congestion by reducing the temporary disruptions in traffic caused by traffic crashes.¹⁷

30 km/h zones help countries to create a sustainable and equitable transportation system

30 km/h speed zones increase opportunities for work and friendship, and reduce health inequalities through improved accessibility for road users with restricted mobility, vision, hearing, or mental health, as well as pedestrians, cyclists, children, elderly, youth, and commuters.^{18,19}

30 km/h zones help countries achieve the Sustainable Development Goals

The wide-ranging benefits of implementing 30 km/h zones mean it contributes to many Sustainable Development Goals, including good health and wellbeing, sustainable cities and communities, climate action, and reduced inequalities.²⁰ In Europe, 30 km/h speed limits are already central to sustainable travel policies in countries such as Denmark, Belgium, Germany, Netherlands, Norway, and Sweden.²¹

Successful implementations

Graz, Austria: 24% reduction in serious injury crashes and 17% reduction in pedestrian crashes in 30 km/h zones

In 1992, Graz became the first city in Europe to impose a 30 km/h speed limit, which now applies to almost 80% of the city's road network—all residential roads, school zones, and areas near hospitals have a 30 km/h speed limit. The primary objectives of the scheme were to increase safety, and reduce pollution and noise. On roads where a 30 km/h speed limit has been implemented, the total number of crashes has decreased by 25%, and over 80% of all crashes in the city take place on through roads where the speed limit is still 50 km/h.²² The introduced speed limit was marked with signage and supported by police enforcement along with publicity campaigns. This resulted in a reduction of 12% in crashes involving minor injuries and a reduction of 24% in crashes involving serious injuries. Crashes involving pedestrians decreased overall by 17% and those involving motorists by 14%.²³

¹⁵ Job, R.F.S. & Mbugua, L.W. (2020). Road Crash Trauma, Climate Change, Pollution and the Total Costs of Speed: Six graphs that tell the story. GRSE Note 2020.1. Washington DC: Global Road Safety Facility, World Bank.

¹⁶ Global Road Safety Facility. (2023). Speed Management Hub - Frequently Asked Questions, Note 8.2.

¹⁷ Global Road Safety Facility. (2023). Speed Management Hub - Frequently Asked Questions, Note 8.2.

¹⁸ The European Federation for Transport and Environment (2001). Lower urban speed limits Better for citizens, better for the environment, better for all.

¹⁹ British Academy. (2014). "If you could do one thing..." Nine local actions to reduce health inequalities. The British Academy.

²⁰ UNESCAP. (2019). Strategies to Tackle the Issue of Speed for Road Safety in the Asia-Pacific Region: Implementation Framework. UNESCAP, Bangkok.

²¹ International Transport forum. (2018). Speed and Crash Risk. International Traffic Safety Data and Analysis Group Research Report.

²² European Federation of Road Traffic Victims. Why 30km/h?. European Federation of Road Traffic Victims

²³ P.24-25, McKibbin, D. (2014). impact of 20mph speed limits. NIAR 168-14, March.

²³ P.7, The Royal Society for the Prevention of Accidents (ROSPA). (2017). 20mph Zones and Speed Limits Factsheet. November.

Toronto, Canada: 67% reduction in serious and fatal injuries in 30 km/h zones

In Toronto, speed limit reductions from 40 km/h to 30 km/h resulted in a 28% reduction in pedestrian crashes between 2013 and 2018 and a 67% reduction in serious and fatal injuries on streets after the 30 km/h limit had been implemented, compared with a 31% decrease in major and fatal injuries on comparator streets. Other measures to support the lower speed limits included senior safety zones, flex-post signs, red-light cameras, watch your speed boards, and school safety zone interventions (such as pavement markings, flashing beacons, school signage, and zebra crossings).²⁴

United Kingdom (UK)

London: 46% reduction in death and serious injury crashes in 30 km/h zones and 8% reduction in adjacent areas

London and many other parts of the UK have implemented 20 mph (30 km/h) zones over the past 15 years or more. These zones are typically marked by signs at the zone's entrance and exit with self-enforcing engineering and design features (traffic calming), including speed humps, chicanes, and raised junctions every 100 meters. The introduction of these 20 mph zones resulted in a 46% reduction in death and serious injury crashes overall and a 50% decrease in death and serious injury crashes for children aged 0–15 inside the zones. These zones had spillover effects to adjacent areas where death and serious injury crashes also decreased by 8%. Furthermore, death and serious injury crashes involving pedestrians and bicycle riders decreased by 35% and 38%, respectively.²⁵

Bristol: 63% city-level reduction in road deaths

In Bristol, the implementation of 20 mph zones has led to a city-level reduction in fatalities of 63%.²⁶ The 20 mph zones are marked by speed limit signs at the beginning (entry point) and the end (terminal point) of the zone and additional repeater signs within the zone. Additionally, vehicle-activated signs and road markings are used to intensify the prominence of the zone.²⁷

Warrington: 43% reduction in serious and slight pedestrian injuries in 20 mph zones

Warrington implemented three pilot 20 mph speed limit zones (totaling 140 roads) in a residential neighborhood in February 2009 for an experimental 18-month period. During this period, 12 serious and slight pedestrian injuries were reported, a reduction of 43% compared to the 18-month period before the experimental period.²⁸

Brighton and Hove: 45 less casualties in the first year of 20 mph zones introduction

In Brighton and Hove, 20 mph limits were introduced in the city center in April 2013. In the first year of operation, traffic speeds decreased on 74% of the routes in the city center, resulting in 327 (-45) casualties involving 0 (-1) fatal, 43 (-11) serious and 284 (-33) slight injuries.²⁹

²⁴ Fridman, L., Ling, R., Rothman, L., Cloutier, M.S., Macarthur, C., Hagel, B., & Howard, A. (2020). *Effect of reducing the posted speed limit to 30 km per hour on pedestrian motor vehicle collisions in Toronto, Canada - A quasi experimental, pre-post study*. BMC Public Health, 20(1), 1–8.

²⁵ Grundy, C., Steinbach, R., Edwards, P., Green, J., Armstrong, B., & Wilkinson, P. (2009). Effect of 20 mph traffic speed zones on road injuries in London, 1986-2006: Controlled interrupted time series analysis. *BMJ* 339:B4469

²⁶ Bornioli, A., Bray, L., Pilkington, P., & Parkin, J. (2020). Effects of city-wide 20 mph (30km/hour) speedlimits on road injuries in Bristol, UK. *Injury Prevention*, 26(1), 85–88. <https://doi.org/10.1136/injuryprev-2019-043305>

²⁷ P.17-19, McKibbin, D. (2014). *Impact of 20mph speed limits*. NIAR 168-14, March.

²⁸ Fisher, J. & Tune, M. (2010). *20mph speed limit pilots: Evaluation report*. WARRINGTON BOROUGH COUNCIL.

²⁹ Brighton & Hove City Council. (n.d.). *Safer streets, better places*. Retrieved July 29, 2022.

Bogotá, Colombia: 30 km/h speed limit compliance increased from 29% to 86% when complemented with traffic calming measures*

In Bogotá, the speed limit for residential areas and school zones was already set to 30 km/h throughout the city, but drivers often exceeded the speed limit. As a result, Tunjuelito municipality was selected to pilot traffic calming measures, including chicanes, lane narrowing, and chokers at intersections, to match operating speeds with the posted speed limit. During the pilot intervention, driver compliance with the speed limit increased from an average of 29% to 86%, including from 36% to 97% in front of one school where chicanes and chokers were installed.³⁰

South Africa: 25–35% reduction in mean speeds in 30 km/h zones*

In South Africa, speed reduction strategies especially using 30 km/h speed limit signs were introduced at school zones with high pedestrian activity. This resulted in a 20–35% reduction in mean speeds and qualitative feedback from the schools showed widespread acceptance of the measure.³¹

*Any travel speed reduction achieved via signage, police enforcement and/or road design measures has death and injury reduction benefits. In principle, a 1% reduction in average speed results in an approximate 2% decrease in injury crash frequency, a 3% decrease in severe crash frequency, and a 4% decrease in fatal crash frequency³². Furthermore, 10 km/h reduction in a speed limit could be expected to produce around a 15-20% reduction in injury crashes, and up to around a 40% reduction in pedestrian fatal and serious injuries.³³

How to implement it

The following guidance documents can support governments in the design and implementation of 30 km/h zones:

- *Low-Speed Zone Guide* developed by the Global Road Safety Facility (World Bank) and the World Resources Institute³⁴
- *Global Street Design Guide* developed by the Global Designing Cities Initiative³⁵
- *Road Safety Toolkit* developed by the International Road Assessment Programme (iRAP)³⁶

³⁰ P99 & 100, Sharpin, A.B., Adriaola-Steil, C., Luke, N., Job, S., Obelheiro, M., Bhatt, A., Liu, D., Imamoglu, T., Welle, B., & Lleras, N. (2021). *LOW-SPEED ZONE GUIDE*. Bloomberg Philanthropies.

³¹ Lambert, F. & Venter, C. (2015). *Testing the impact and feasibility of 30km/h speed limit zones at schools*. Proceedings of the 34th Southern African Transport Conference.

³² OECD/International Transport Forum. (2018). *Speed and crash risk*. ITF (International Transport Forum).

³³ Turner, B., Job, S., & Mitra, S. (2021). *Guide for Road Safety Interventions: Evidence of What Works and What Does Not Work*. World Bank, Washington, DC., USA.

Elvik, R. (2009). *The power model of the relationship between speed and road safety. Update and new analyses*. Institute of Transportation Economics. TOI Report 1034/2009.

Mitra, S., Job, S., Han, S., & Eom, K. (2021). *Do Speed Limit Reductions Help Road Safety? Do Speed Limit Reductions Help Road Safety?* June. OECD/International Transport Forum. (2018). *Speed and crash risk*. ITF (International Transport Forum).

³⁴ Sharpin, A.B., Adriaola-Steil, C., Job, S., et al. (2021). *Low-Speed Zone Guide*. World Resources Institute and The Global Road Safety Facility

³⁵ Global Designing Cities Initiative. (2016). *Global Street Design*. Island Press; 2nd None ed. edition

³⁶ International Road Assessment Programme, iRAP. (2022). *The Road Safety Toolkit*.