

Achieving the SDG on halving road deaths and injuries: impacts and the role of Infrastructure



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Introduction
ADB Transport Forum 2016
12 September 2016

About iRAP

- Our vision is a world free of high risk roads.
- The International Road Assessment Programme (iRAP) is a registered charity dedicated to preventing the more than 3,500 road deaths that occur every day worldwide.
- At the heart of iRAP is a spirit of cooperation. We provide tools and training to help automobile associations, governments, funding agencies, research institutes and other non-government organisations in more than 70 countries make roads safe.

Programme donors



Managed by the
World Health
Organisation



Project partners



Centres of Excellence



Self-governing programmes



The most
dangerous phrase
in the language is "we've
always done it this way."

Rear Admiral Grace Hopper

Aims of Today

- Understand relationships between road design and risk:
 - How a star ratings change with changes to road attributes
 - Large-scale assessments, metrics and policy
- Know what achieving the SDG target for road safety means for your country:
 - Deaths and injuries prevented
 - Economic benefit
 - Effect of focussing on different ‘pillars’

Schedule

- 9am – 10am: Introduction
- 10am – 12pm: Star Rating interactive session
- 12pm – 1pm: Lunch
- 1pm – 3pm: SDG interactive session
- 3pm - 4pm: Case studies

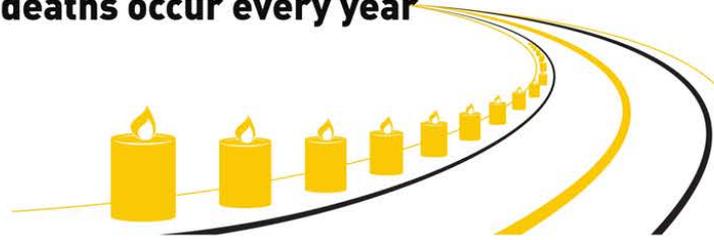
ROAD TRAFFIC INJURIES: THE FACTS

1.25 million

road traffic deaths occur every year

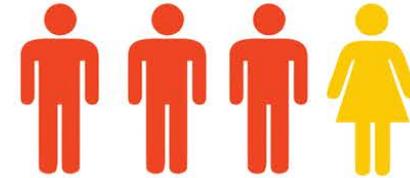
#1

cause of death among those aged 15-29 years

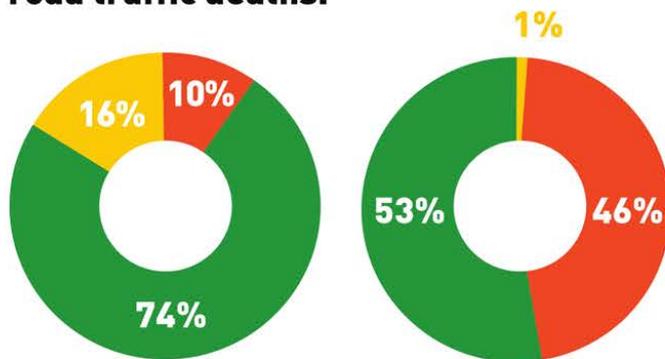


3 out of 4

road deaths are among men



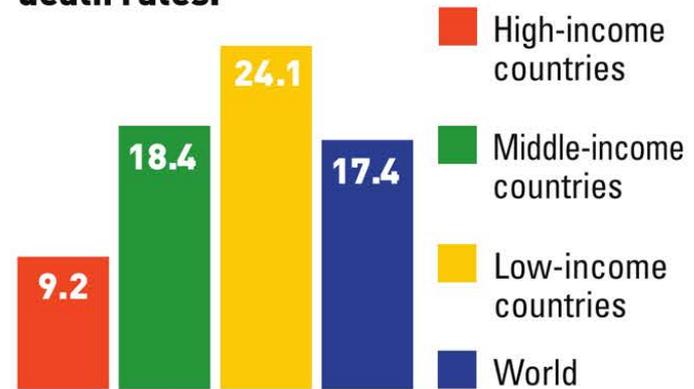
Although low- and middle-income countries have only half of the world's vehicles, they have 90% of the world's road traffic deaths.



DEATHS

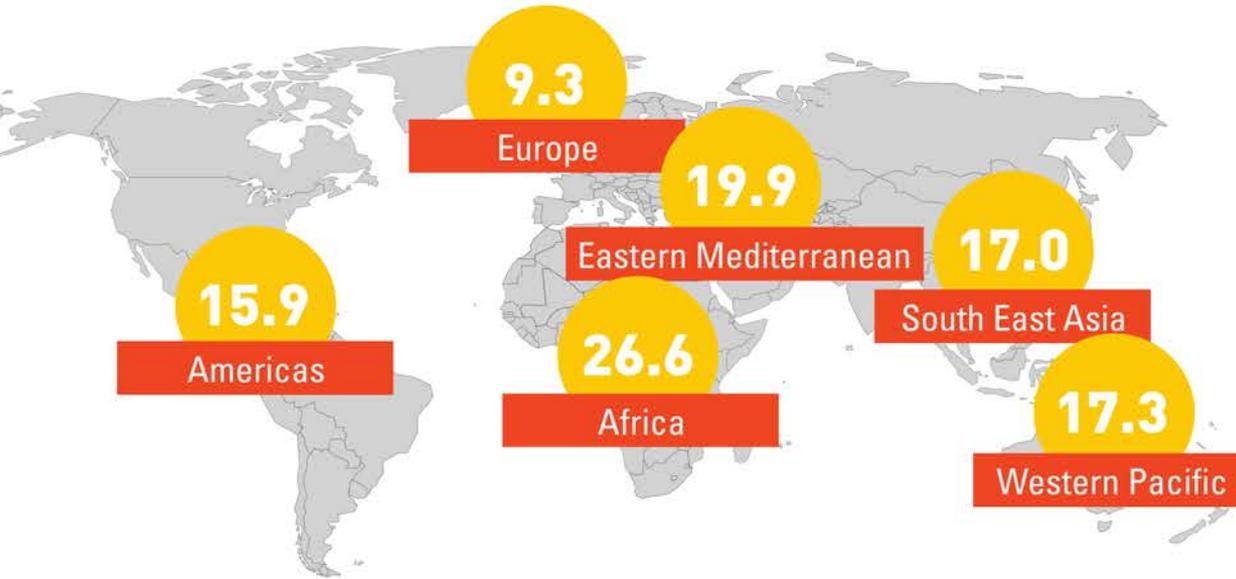
VEHICLES

Low-income countries have the highest road traffic death rates.



Road traffic fatalities per 100 000 population

The chance of dying in a road traffic crash depends on where you live



Road traffic fatalities per 100 000 population



49%

of all road traffic deaths are among pedestrians, cyclists and motorcycles.



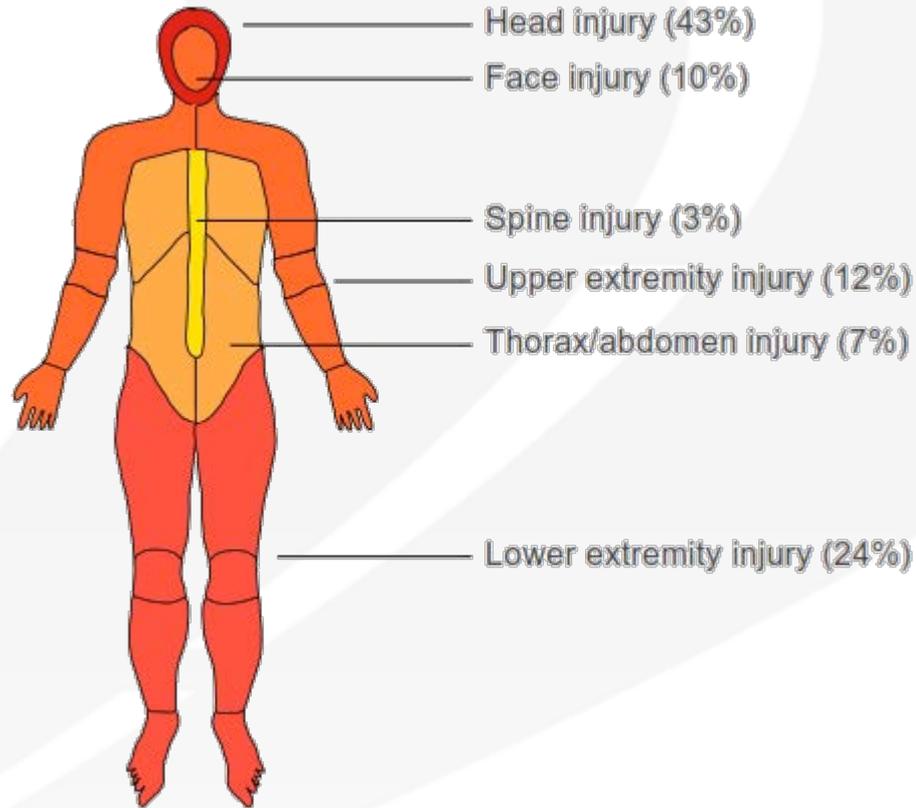
World Health Organization

Global status report on road safety 2015

www.who.int/violence_injury_prevention/road_safety_status/2015/en/



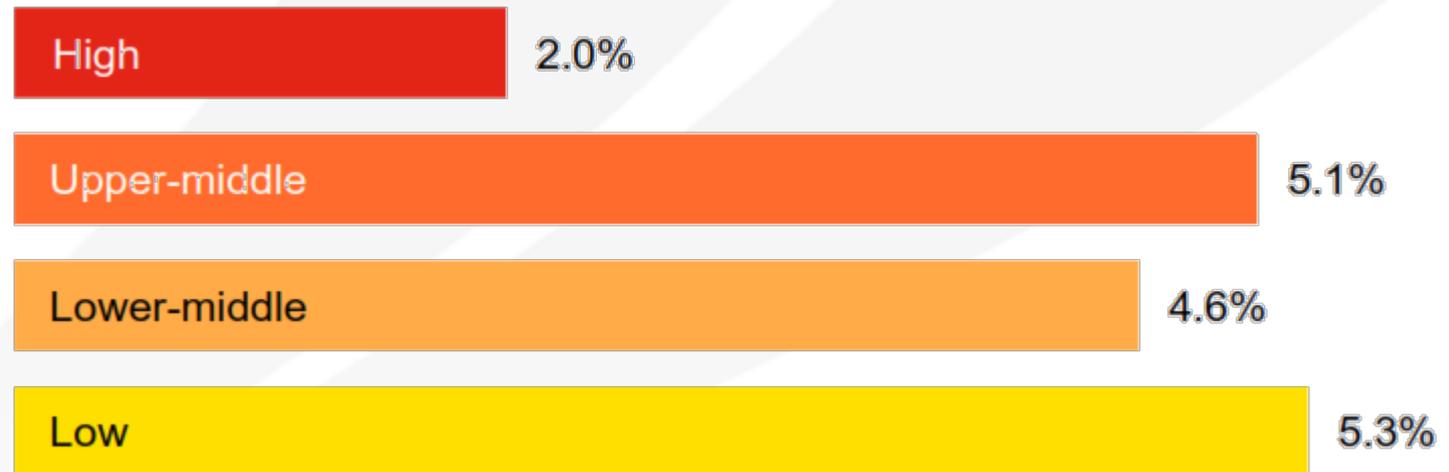
At the Thai Binh General Hospital in Vietnam more than half of patients admitted with injuries are road traffic crash victims



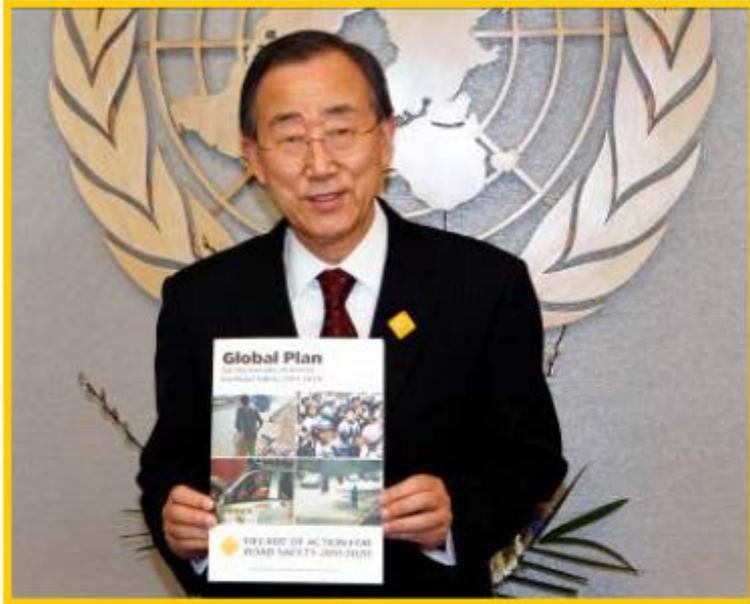
Households in Bangalore, India impacted by a road death



Estimated cost of death and serious injuries in countries by income group, as a percentage of GDP

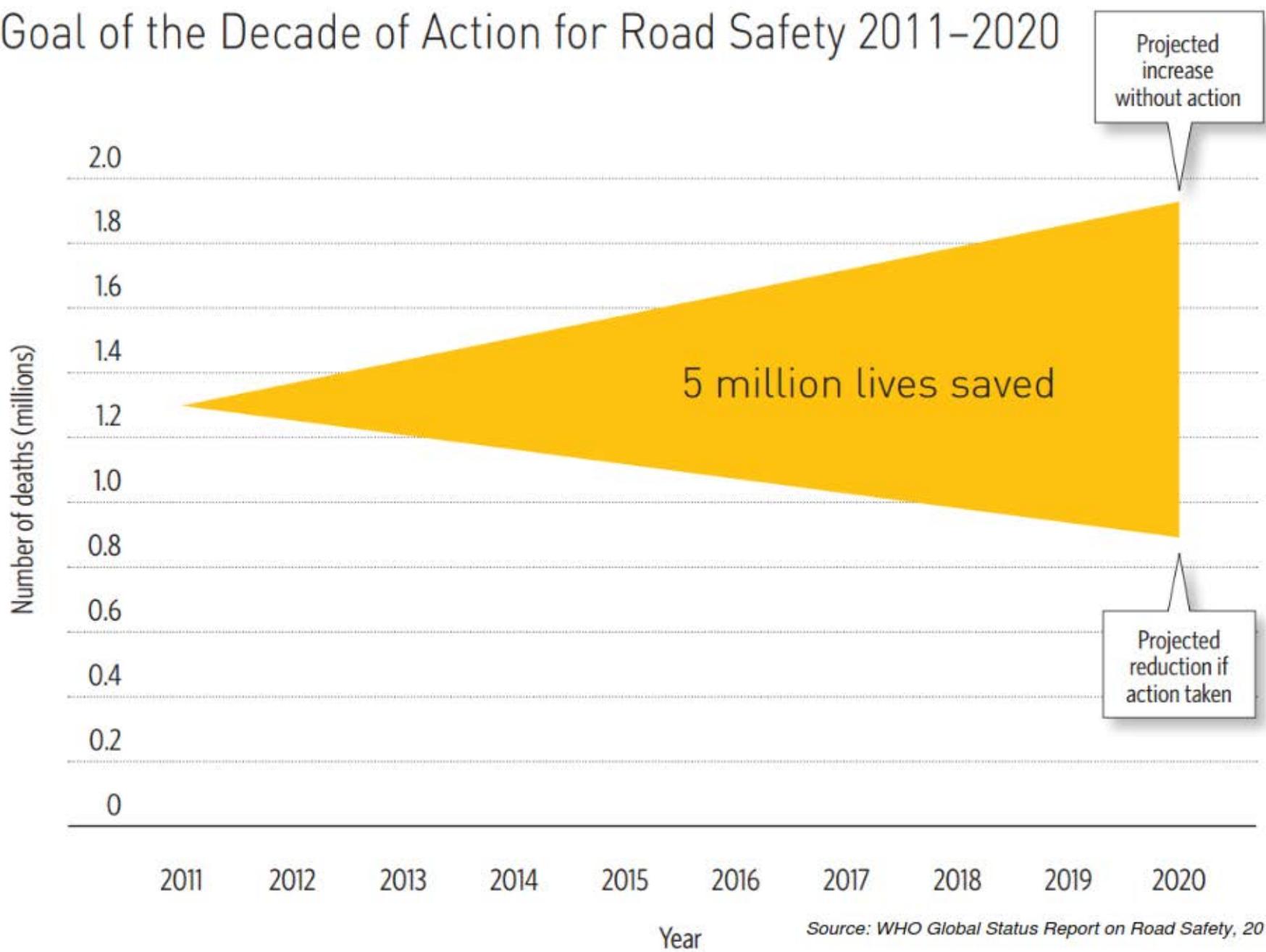


UN Decade of Action for Road Safety (2011-2020)



Source: Global Road Safety Partnership

Goal of the Decade of Action for Road Safety 2011–2020





Goal 3: Ensure healthy lives and promote well-being for all:

- 3.6. By 2020, **halve the number of global deaths and injuries** from road traffic accidents

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable:

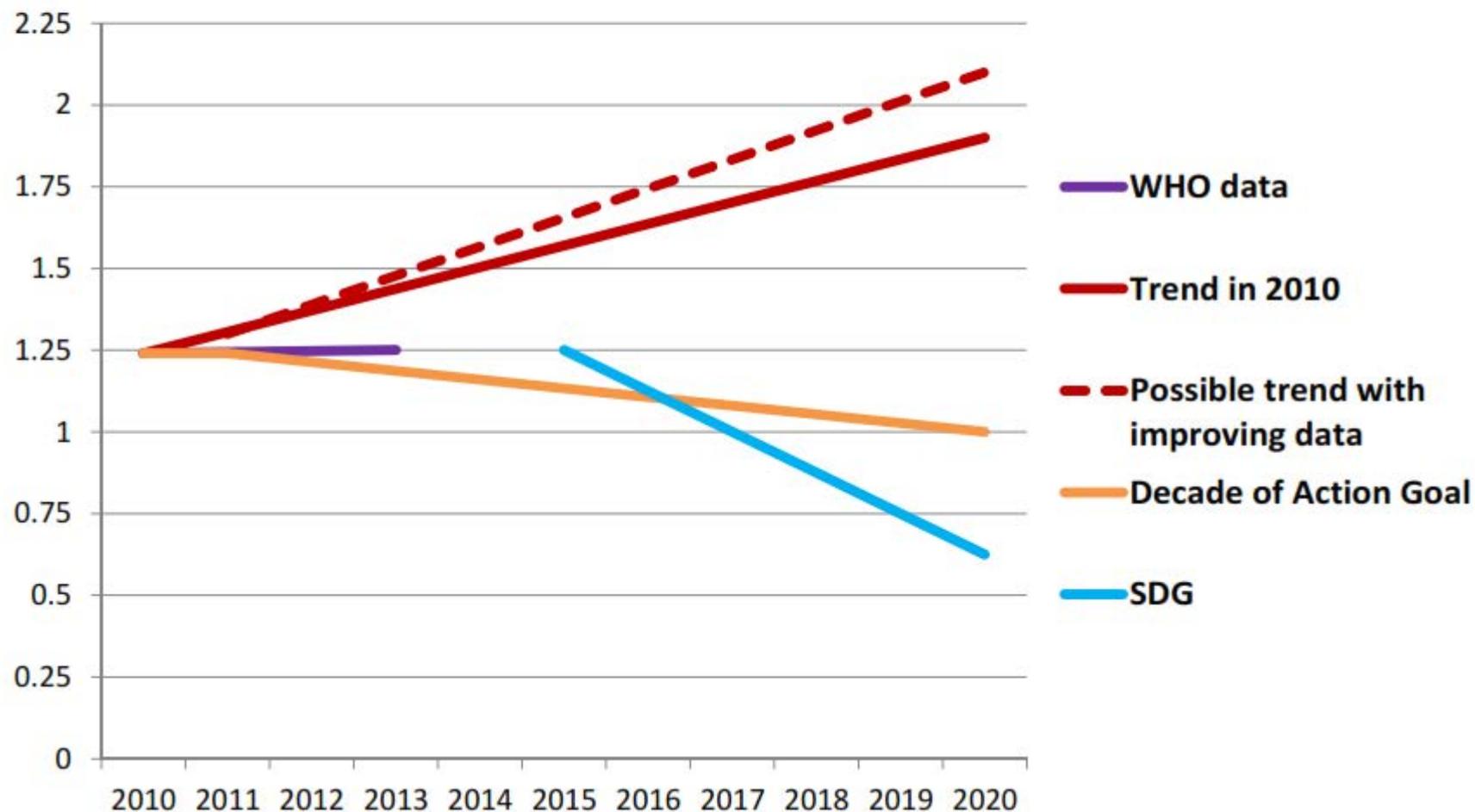
- 11.2. By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, **improving road safety**, notably by expanding public transport . . .

- The recent UN Resolution on *Improving Global Road Safety* acknowledged these ambitious targets and called for renewed action by governments and other stakeholders

The Global Road Safety Partnership is hosted by:



SDG Goals vs. Decade of Action Goals



Source: Perkins, ITF



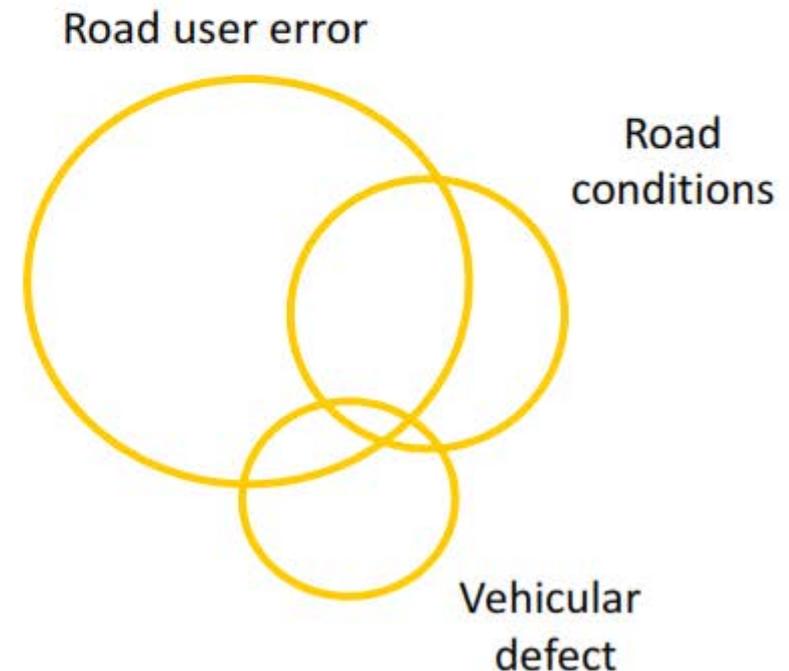
The need for a system-based, strategic perspective

“For the first 50 years of motorization in the United States, Australia, and Europe, the almost exclusive emphasis was on trying to prevent crashes by changing the behaviour of individual drivers. This delayed for decades the recognition and application of possible prevention measures in other components of the causal chain leading to injury.” (Williams, 2000, p.1)



Crash causes

- Rarely a single cause of a crash, but a 'causal chain' of events
 - 90% road user error
 - 30% road conditions
 - 10% vehicular defect or failure



Source: Shinar, 1978



Crash prevention vs crash causes

“While the predominance of ‘human errors’ as causes of accidents should serve as a humbling experience, it does not imply that the practical way to eliminate most accidents is to ‘fix’ the driver. On the contrary, it appears that of the three major highway traffic components - the driver, the vehicle, and the roadway environment - the driver is the most difficult to change or improve”
(Shinar, 1978, p.126)



Source: New Zealand Ministry of Transport

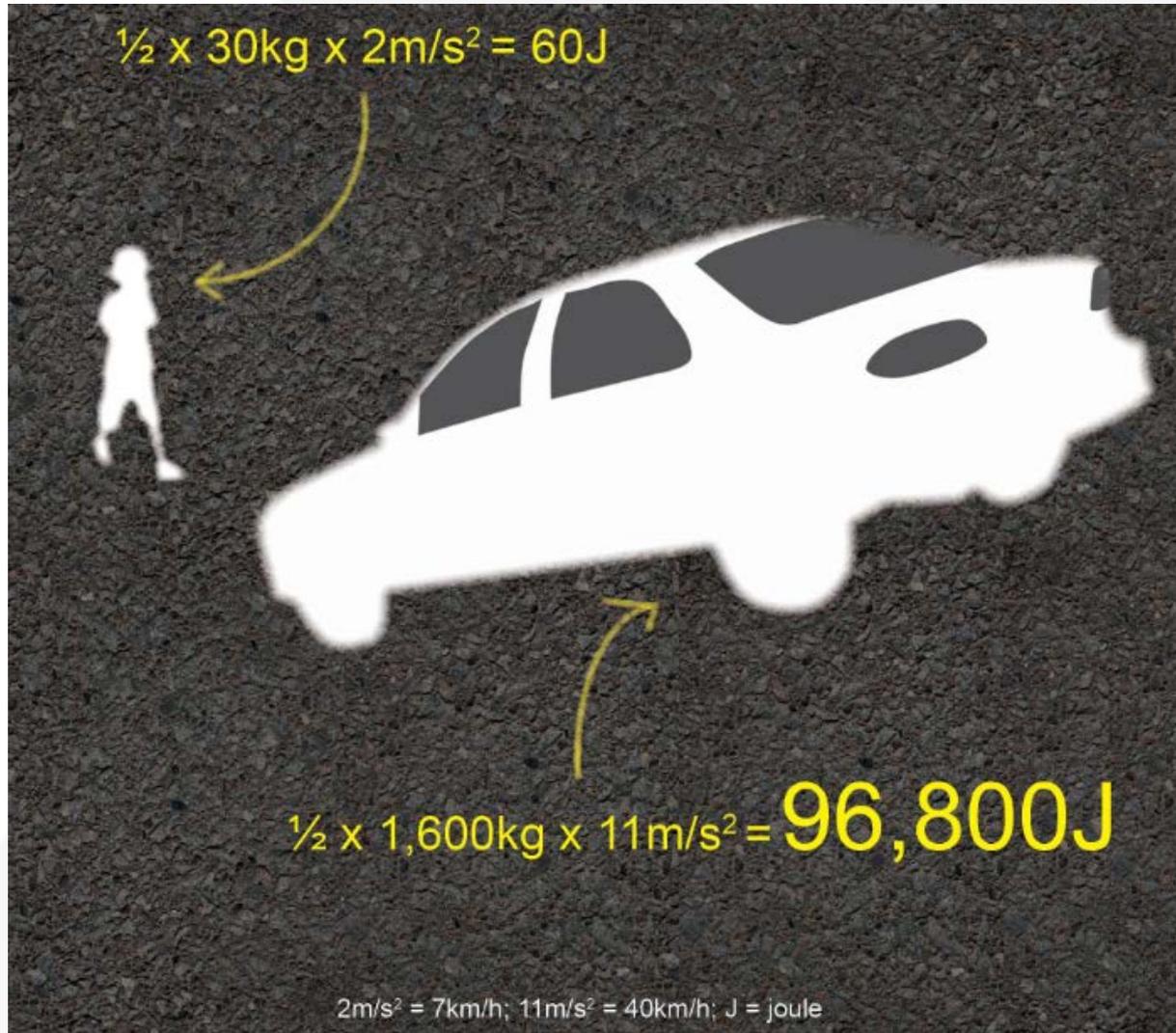
We know what works: making vehicles safer and designing roads to be safe for all road users; tackling inappropriate speed and drink driving; promoting seat belt use and helmet wearing; improving driver training and police enforcement; taking care to protect the most vulnerable road users like children and pedestrians.

Make Roads Safe campaign

Managing Energy and Humans

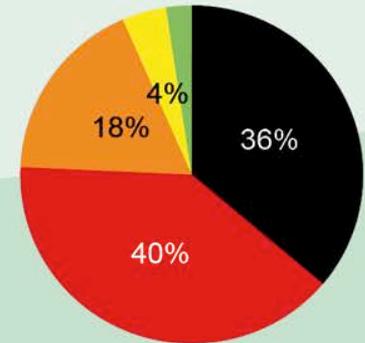
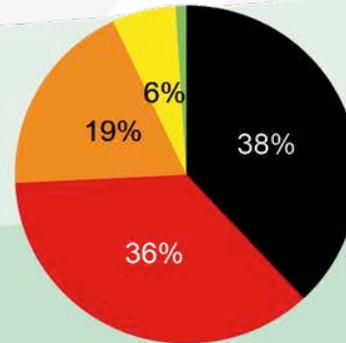
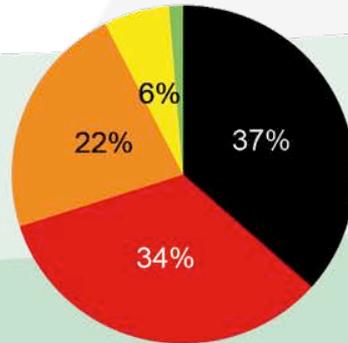
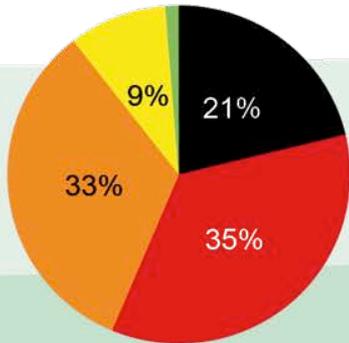


A car traveling at 40km/h has **1,600** times for kinetic energy than a child crossing the street



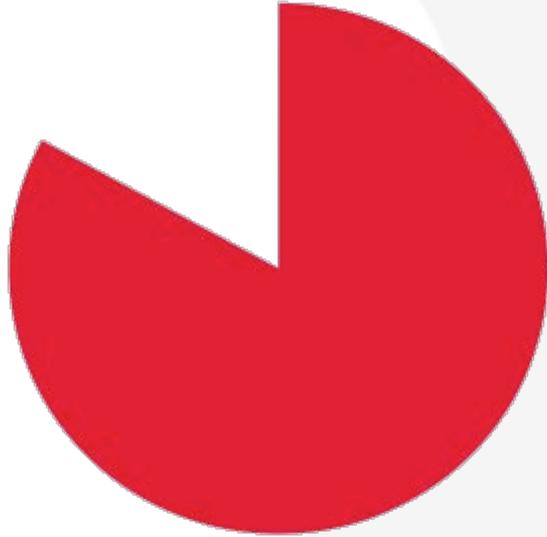
How Roads Rate

200,000km in 60 countries



5-star 4-star 3-star 2-star 1-star

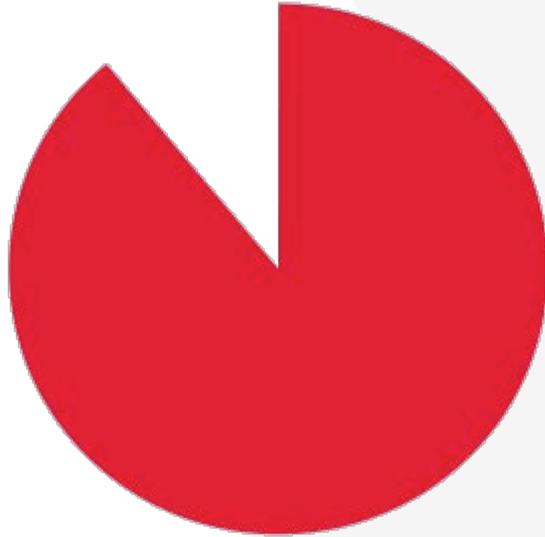
Pedestrians at risk



83% of roads where pedestrians are present and traffic flows at 40km/h or more have no formal footpaths

250,000km in 60 countries

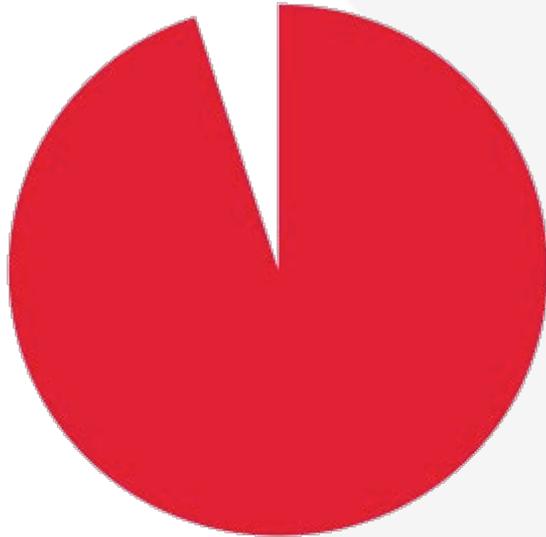
Pedal powered at risk



89% of roads where bicyclists are present
and traffic flows at 40km/h or more have
no bicycle facilities

250,000km in 60 countries

Motorised two-wheelers at risk

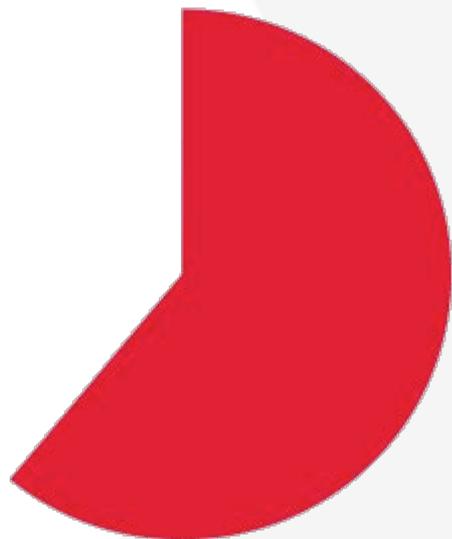


95% of roads with high motorcycle flows ($\geq 20\%$ of total) and where traffic flows at 60km/h or more have no motorcycle facilities

250,000km in 60 countries



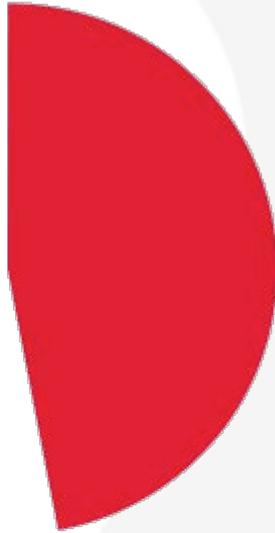
Head-on risk



61% of roads where traffic flows at 80km/h or more are undivided single carriageways

250,000km in 60 countries

Run-off risk



47% of curves where traffic flows
at 80km/h or more have hazardous
roadsides

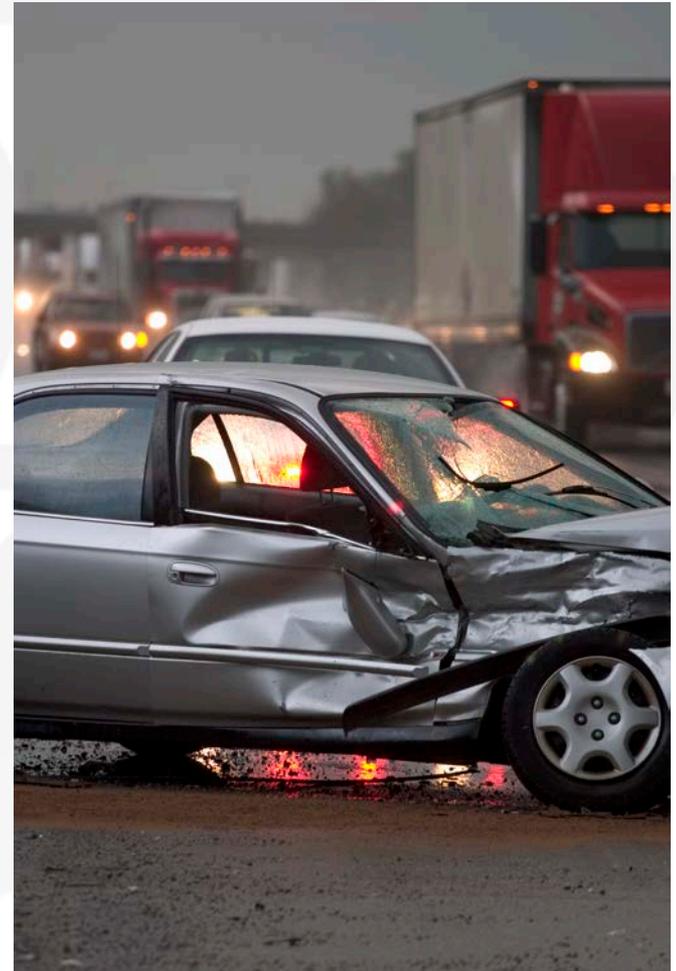
250,000km in 60 countries

Intersection risk



57% of intersections where traffic flows at 60km/h or more have no roundabout, protected turn lane or interchange

250,000km in 60 countries



Let us all work together to make sure the world's roads are safe. If we lead by example we can save millions and millions of lives. This is what the United Nations is working very hard for – a safer world for all.



Examples of Resources

- The *Sustainable Development Goals (SDG)* which set a road safety target for every country.
- World Health Organization's (WHO) *Global Status Report on Road Safety*, which provides data on a range of road safety metrics for countries.
- ADB's *Implementation of Sustainable Transport Initiative: Mainstreaming Road Safety in ADB Operations Action Plan* which describes the need for strengthening road safety components in ongoing investment projects; mainstreaming road safety components in new projects; and establishing stand-alone road safety pipelines.
- ADB's *Toward a Sustainability Appraisal Framework for Transport* which describes a methodology for measuring the sustainability of the bank's projects and includes road safety elements.
- ADB's *International Lessons for Road Safety in the People's Republic of China*.
- ADB initiatives such as: *Enhancing Road Safety for CAREC Countries* and *Improving Road Safety in the Association of Southeast Asian Nations*.
- SSATP's *Guidelines for Mainstreaming Road Safety in Regional Trade Road Corridors*.
- World Bank Global Road Safety Facility's *Road Safety Management Capacity Reviews*.
- Extensive World Bank documentation of road projects that include iRAP and crash data safety performance indicators, safe demonstration corridors and improved designs for safety (see for example the *Gujarat State Highway Project II* and the *Kerala State Highway Project II*).