### **MODULE 2**

### SAFER ROAD USERS: UNDERSTANDING ROAD TRAFFIC RISKS FOR ROAD USERS

September 27, 2021

Dr Judy Fleiter, GRSP









Internal







# Every 24 seconds...

Public

# **Overview**



The Global Road Safety Partnership is hosted by



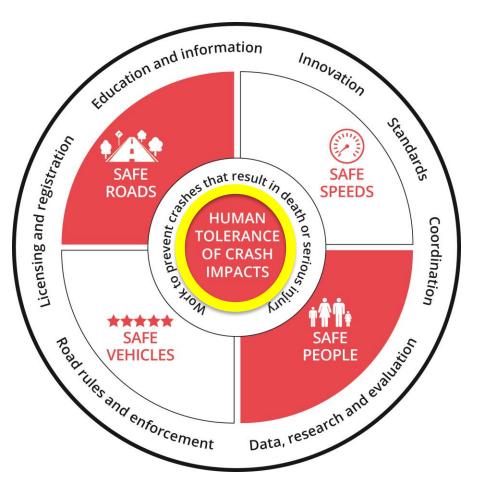


- Brief summary of the Safe System Approach Road Users
- Risk and Exposure
- Who is Vulnerable?

### The Safe System Approach



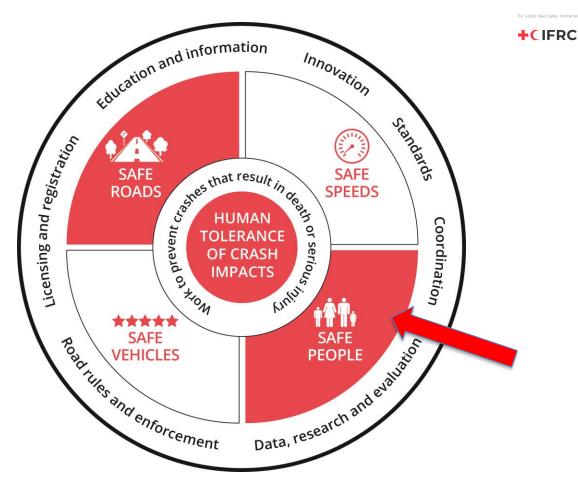
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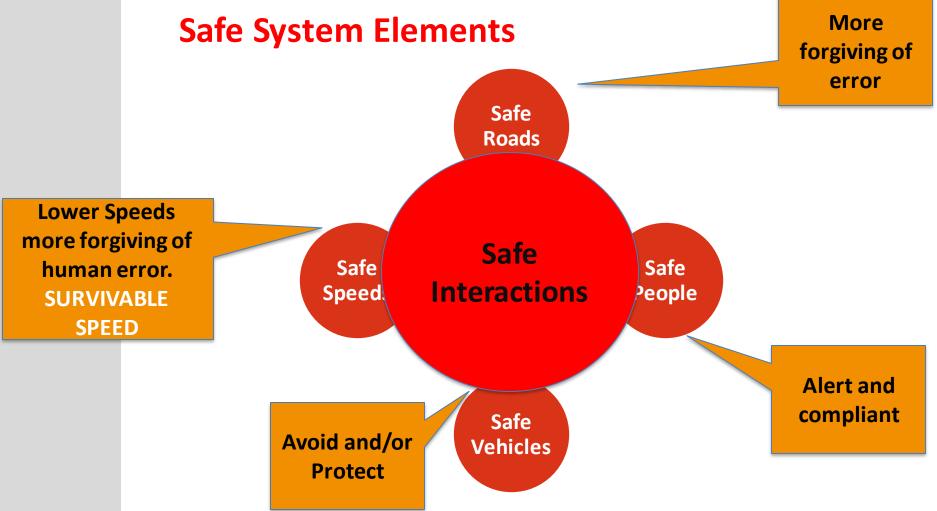


### The Safe System Approach















# Who is at risk on roads in your country?







# Who is MOST AT RISK on roads in your country?







# How do you know this?







# **Risk and Exposure**

Public

## **Exposure (to Risk)**



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#### • Exposure:

- The extent to which groups or segments of the population are likely to be involved in a crash
- Usually defined as amount of travel

Risk:

Used to quantify the level of safety, relative to level of exposure

The uses of exposure and risk in road safety studies https://www.swov.nl/sites/default/files/publicaties/rapport/r-2002-12.pdf

## **Exposure (to Risk)**



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Increased exposure leads to greater risk of crash involvement

- Exposure relates to the amount and type of road use. For example:
  - Commercial drivers are on the road for longer
  - Younger people may drive more at high risk times
  - Older people may limit their driving





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- Distance travelled
  - Number of kilometres travelled per travel mode
  - Vehicles, pedestrians
- Traffic volumes, number of vehicles passing a point
- Time spent travelling (time in traffic)
- Fuel consumption (national level)



### **Data Sources**



The Global Road Safety Partnership is hosted by:



#### Mass Crash Databases

Usually based on police investigation

#### • In-depth Crash Studies

- Research institutions
- Hospital Databases
  - May be more complete than police records
- Insurance Databases
  - May include cases not reported to police
- Traffic Offences
  - May assist with understanding trends in road user behaviour



## **Data Sources**



#### Traffic volumes

- Often collected for traffic engineering purposes
- Motorways, main rural roads, major intersections
- National fuel consumption (proxy measure)



#### **National Travel Surveys**

- Road user groups: car drivers, car passengers, public transport passengers, cyclists, pedestrians
- Number of trips made, time & purpose of trip
- **Speed surveys** 
  - Consideration of travel speeds for different road user groups
  - Higher speeds higher risk

## **Exposure (to Risk)**



The Global Road Safety Partnership is hosted by:





The lack of detailed and high-quality exposure data is one of the reasons that in many cases, international comparisons are conducted on a per capita or pervehicle basis.

The uses of exposure and risk in road safety studies https://www.swov.nl/sites/default/files/publicaties/rapport/r-2002-12.pdf





# **Risk Perceptions**

What do road users think about risky road use and their risk of being caught if breaking the traffic laws in your country?





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Community attitude surveys

Use to guide mass media campaigns

Perceptions about how risky it is to:

Allows you to follow trends over time

• Speed, drink & drive, ride without a helmet etc

#### • Perceptions about likelihood of:

- Being caught by police
- Receiving penalty when caught

Use to guide mass media campaigns and enforcement operations





## **E-survey of Road Users' Attitudes - ESRA**



- Joint international initiative of research centres and road safety institutes
- Collects comparable data on road safety situation and culture
  - Past and habitual behaviours
  - Attitudes, beliefs, perceived norms and values
- Online surveys provide evidence for policy making at national and international level
  - ESRA1 38 countries
  - ESRA2 48 countries
  - New countries welcome to join

https://www.esranet.eu/







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ESRA2 Webinar Series: Measuring Global Traffic Safety Cultures to Support Effective Road Safety Policy Development

Enforcement and traffic violations - Seat belt & Child restraint systems - Senior road users -Support for policy measures - Pedestrians - Cyclists - Moped drivers and Motorcyclists -Gender Issues - Young road users - Subjective safety and risk perception - Vehicle automation

> September 2020 - February 2021 Recordings of all our webinars are available online!

> > (see here below)

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### **Road Safety Country Profiles**

The Road Safety Country Profiles gives a precise assessment on the magnitude and complexity of road safety challenges faced by low-and middle-income countries (LMICs) and helps policy makers understand the road safety framework in context of their own country systems and performance. This road safety country data presents information on all pillars of road safety (management, roads, speed, vehicles, road users, and post-crash care), along with information on the current status for each country and region along with extensive information on key risk factors, issues and opportunities.



Europe and Central A...  $\rightarrow$ 

Latin America & the  $C \rightarrow$ 

Interactive Website – Global Road Safety Facility:

https://www.roadsafetyfacility.org/#road\_safety\_country\_profiles





#### Road Safety Country Profiles

#### 320,000+ ESTIMATED

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#### ROAD SAFETY COUNTRY PROFILE

## CAMBODIA

#### Cambodia's Road Safety Country Profile

This road safety country data presents information on all pillars of road safety (management, roads, speed, vehicles, road users, and post-crash care), along with information on the current status for each country and region along with extensive information on key risk factors, issues and opportunities.





#### THE SCALE OF THE ROAD SAFETY CHALLENGE Ref: 1,2,3,4,5

CLOSE



## 78%

Percentage of Road Crash Fatalities and Injuries in the economically productive age groups (15 - 64 years.)

## 3:1

Ratio of Male to Female Fatalities with the 15 - 49 year age group being most vulnerable to fatalities.

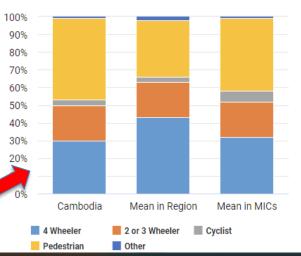
# 1,332 life yrs.

affected due to disability from road crash injuries per 100,000 people.

#### Road crash fatalities and injuries snapshot

Country Population, 2016:	15,762,370
Country Reported Fatalities, 2016:	1,852
WHO Estimated Fatalities, 2016:	2,803
GBD Estimated Fatalities, 2016:	3,995
WHO Est. Fatalities per 100,000 Pop., 2016:	17.8
Estimated Serious Injuries, 2016:	42,045
Cost of Fatalities and Serious Injuries, 2016:	\$1,192 million

#### Fatalities by user comparison chart



FAQ





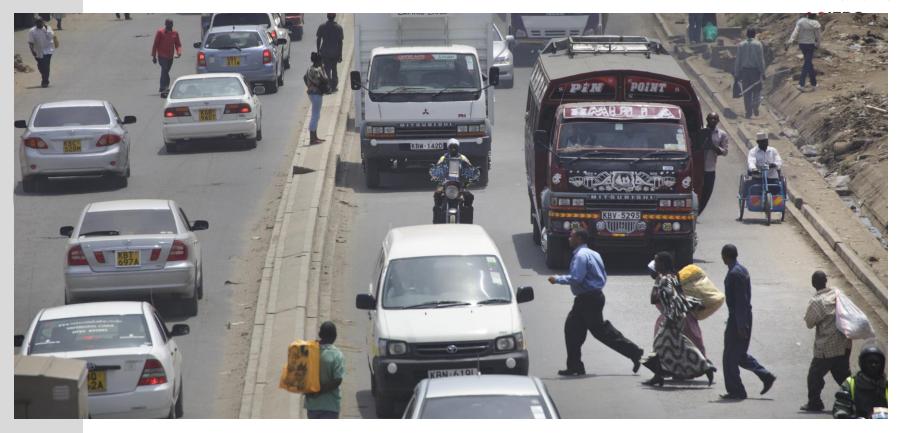


# **Vulnerable Road Users**

#### Who is Vulnerable?



The Global Road Safety Partnership is hosted by:







- The Global Road Safety Partnership is hosted to
- People with little or no protection from impact forces
  - Pedestrians
  - Riders of 2 & 3 wheelers
- Limited task capability
  - Novice drivers
  - Older people
- Less resilient in the event of trauma
  - Children

Vulnerable Road Users or Vulnerable Transport Planning?

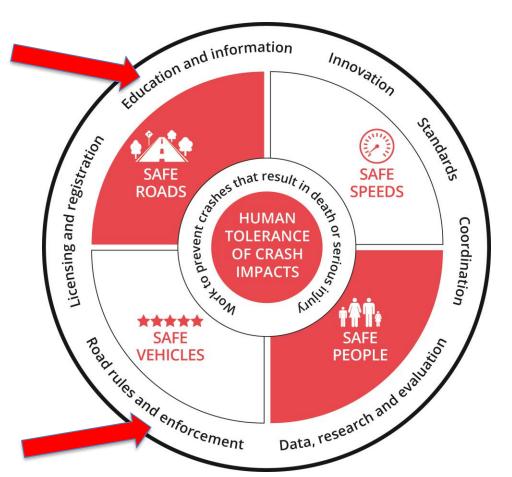
Public Frontiers | Vulnerable Road Users or Vulnerable Transport Planning? | Sustainable Cities (frontiersin.org)

### The Safe System Approach



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## **Cannot Rely on Education to Protect People**



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• Educating people about risks is important, BUT



- Should not be seen as a stand-alone intervention
- Evidence:
  - Education combined with sustained enforcement can bring about desired behaviour change
  - Must be long term and well resourced





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- Provides guidance on developing contextspecific road safety strategy based on Safe System Approach
- Describes SSA, principles, examples of application in policy, & evidence
- Discusses opportunities for wider application in LMICs
- Outlines specific steps policymakers can take to create a plan







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### Safe System Approach:

- 1. shown to be more effective in reducing traffic deaths & injuries than more traditional approaches
- 2. based on evidence-based measures

#### 3. is sustainable

4. can be adopted by countries at all income levels

#### GLOBAL ROAD SAFETY PARTNERSHIP SECRETARIAT



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