



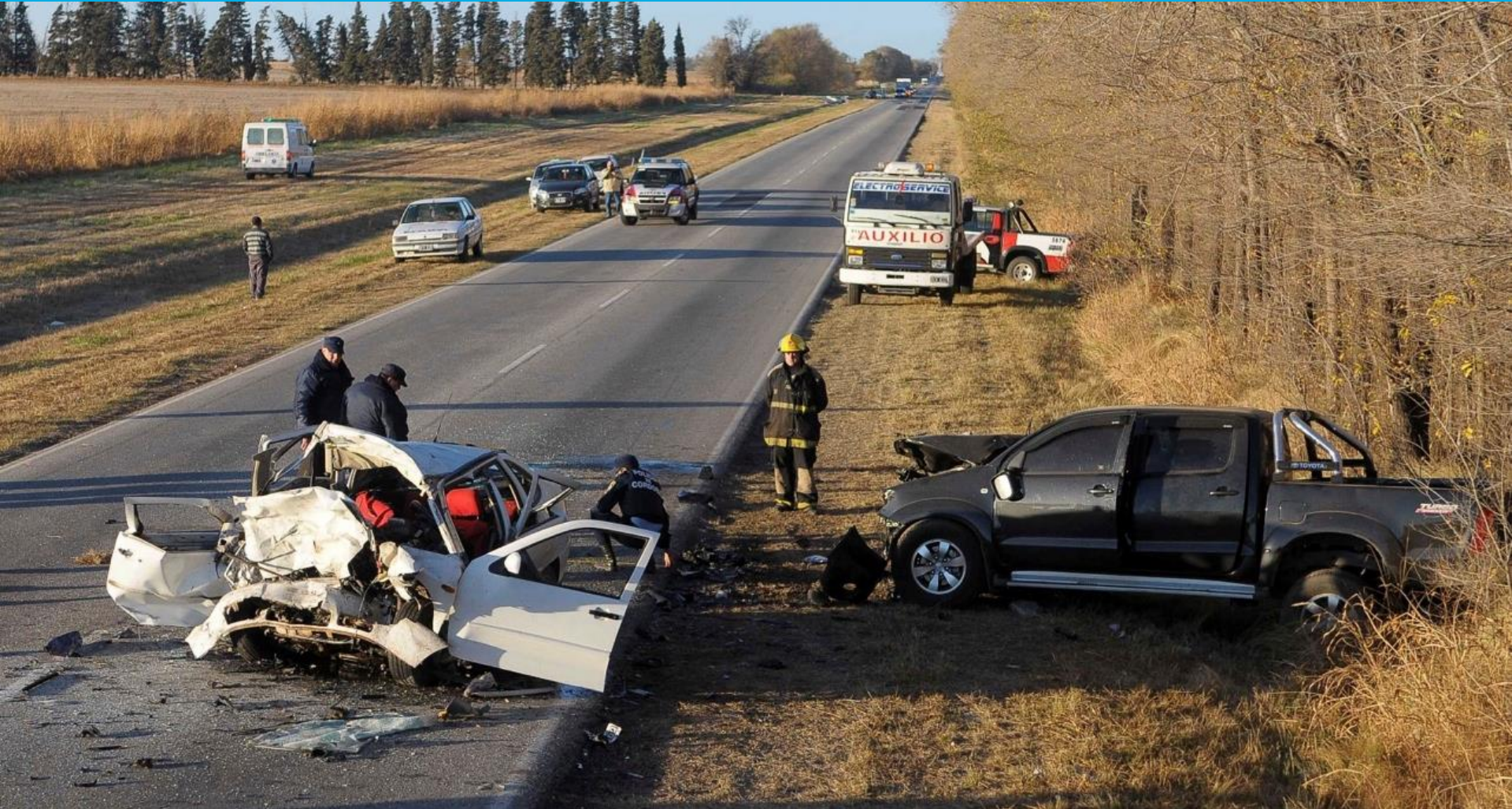
ROAD SAFETY IN GLOBAL PERSPECTIVES

Introduction to the new Road Safety Requirements under the latest World Bank Environmental and Social Framework (ESF)

Transport Global Practice

Mrs. Alina Burlacu
Transport Specialist
World Bank Global Road Safety Facility

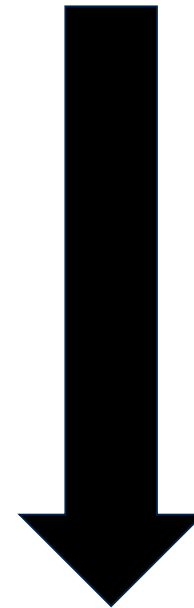
The Importance of Road Safety



Source: iRAP

Magnitude of the Road Safety Crisis

31st of August 1869 – First victim in a road crash

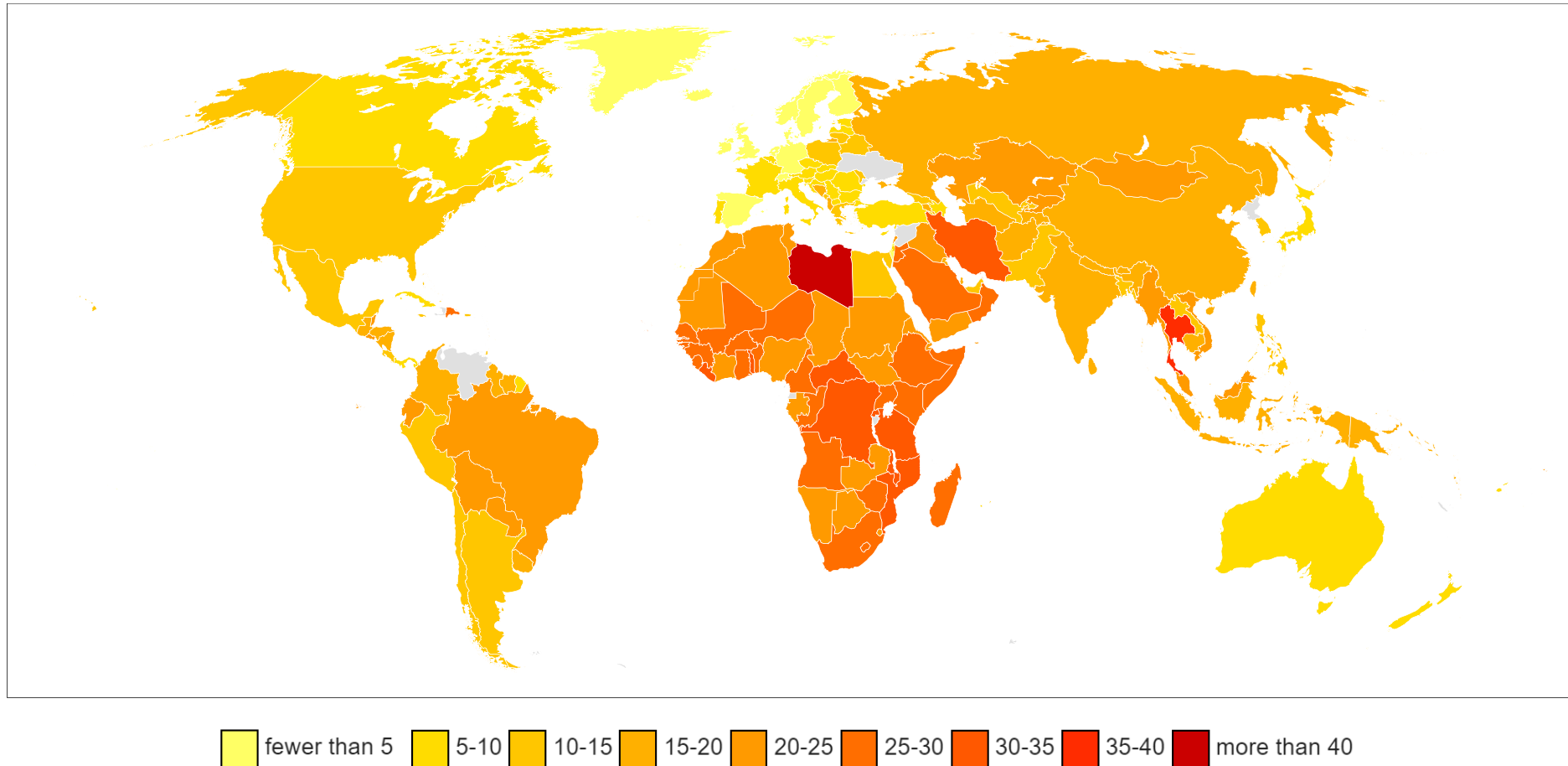


Since then..

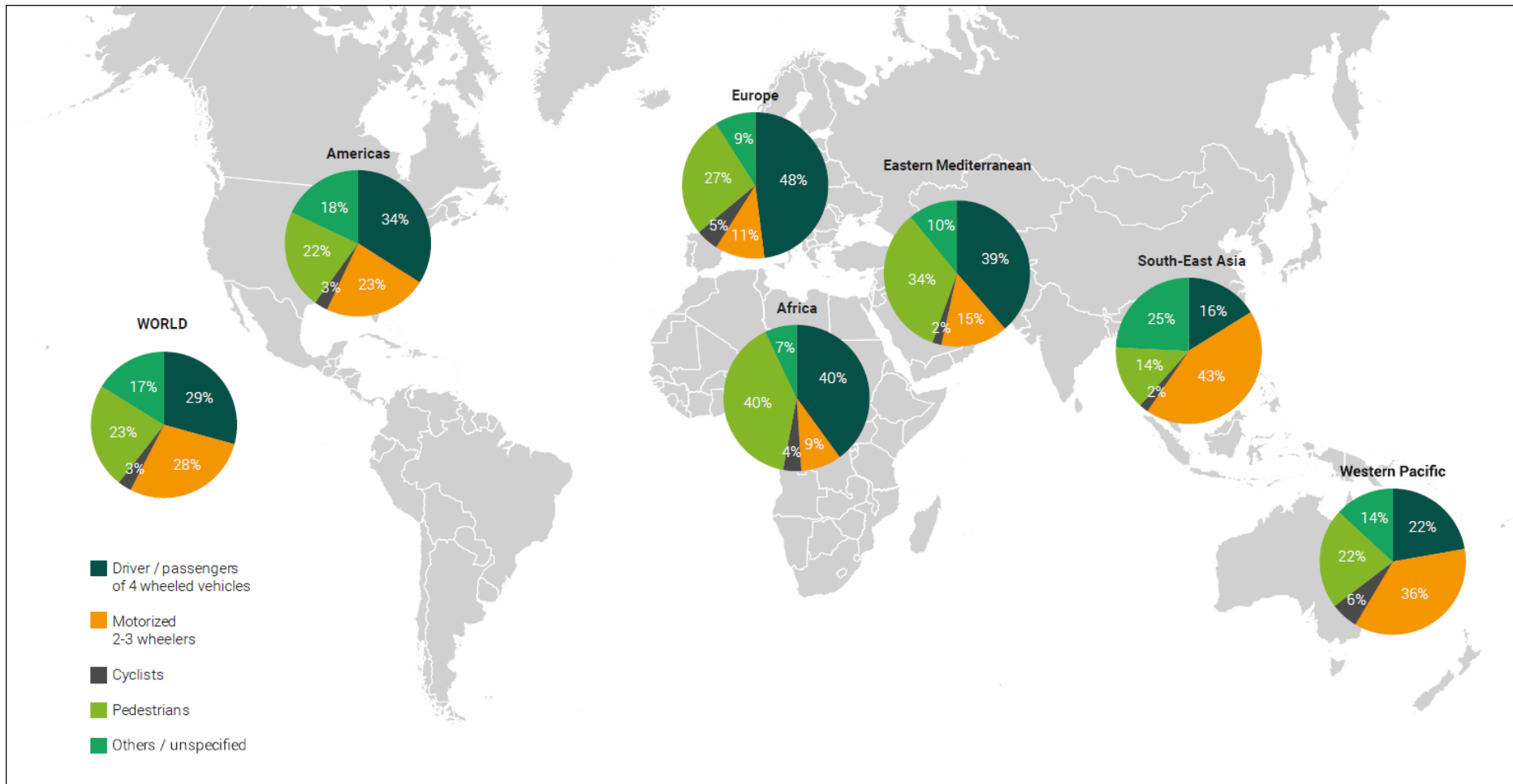
More than **30 million fatalities** worldwide and
hundreds of million injured

Developing World Suffers Most

Death Rates per 100,000 Inhabitants (WHO, 2015)

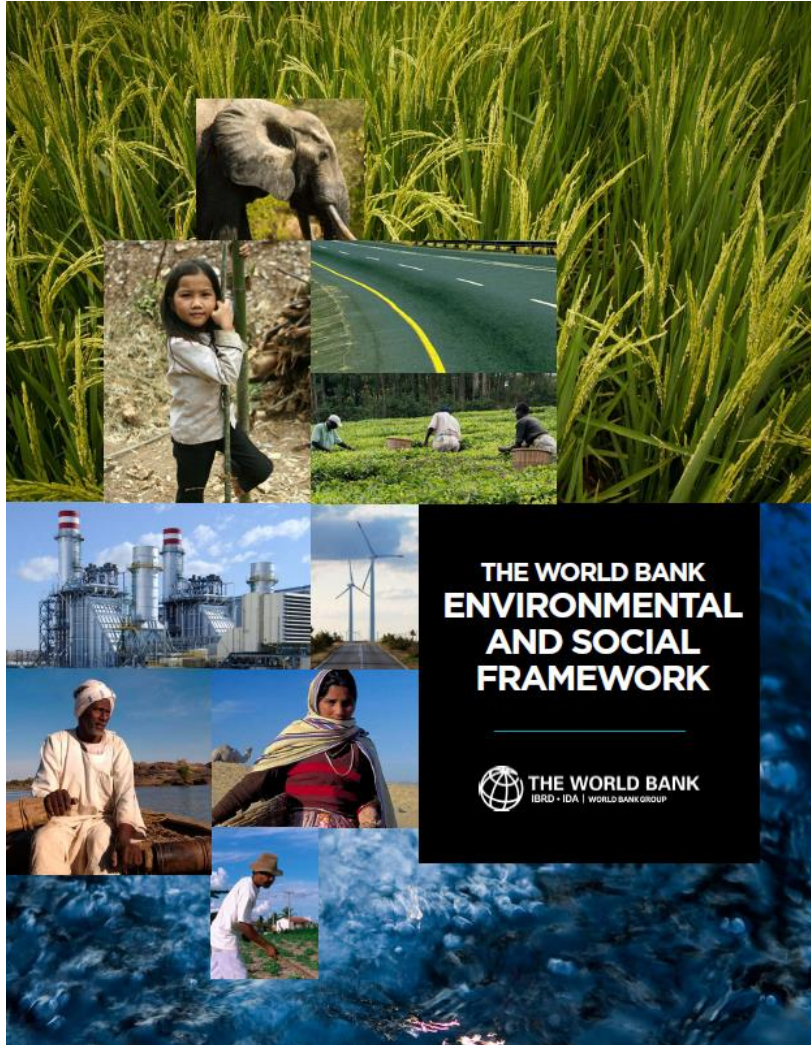


Vulnerable Users Most at Risk



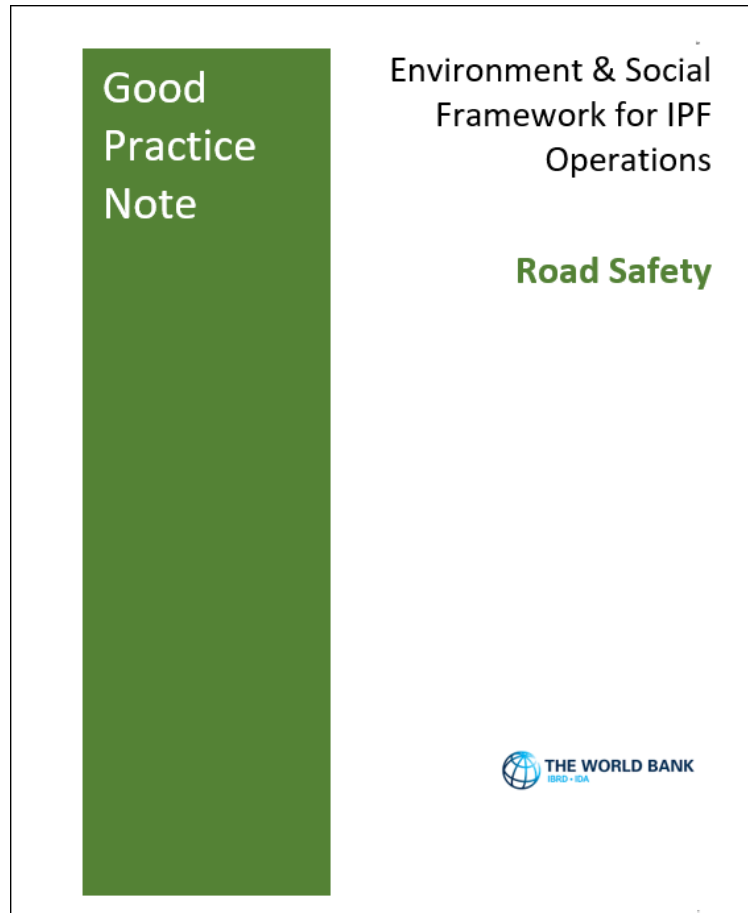
Source: 2018 WHO Global Status Report on Road Safety

Road Safety in the ESF



- Part of World Bank Environmental and Social Framework (ESF)
- ESS4 Para 10-13
 - Identify risks
 - Do road safety assessments
 - Implement feasible mitigation measures
 - Monitor safety
 - Procure safe vehicles
 - Operate construction equipment safely on public roads

Road Safety Good Practice Note (GPN)

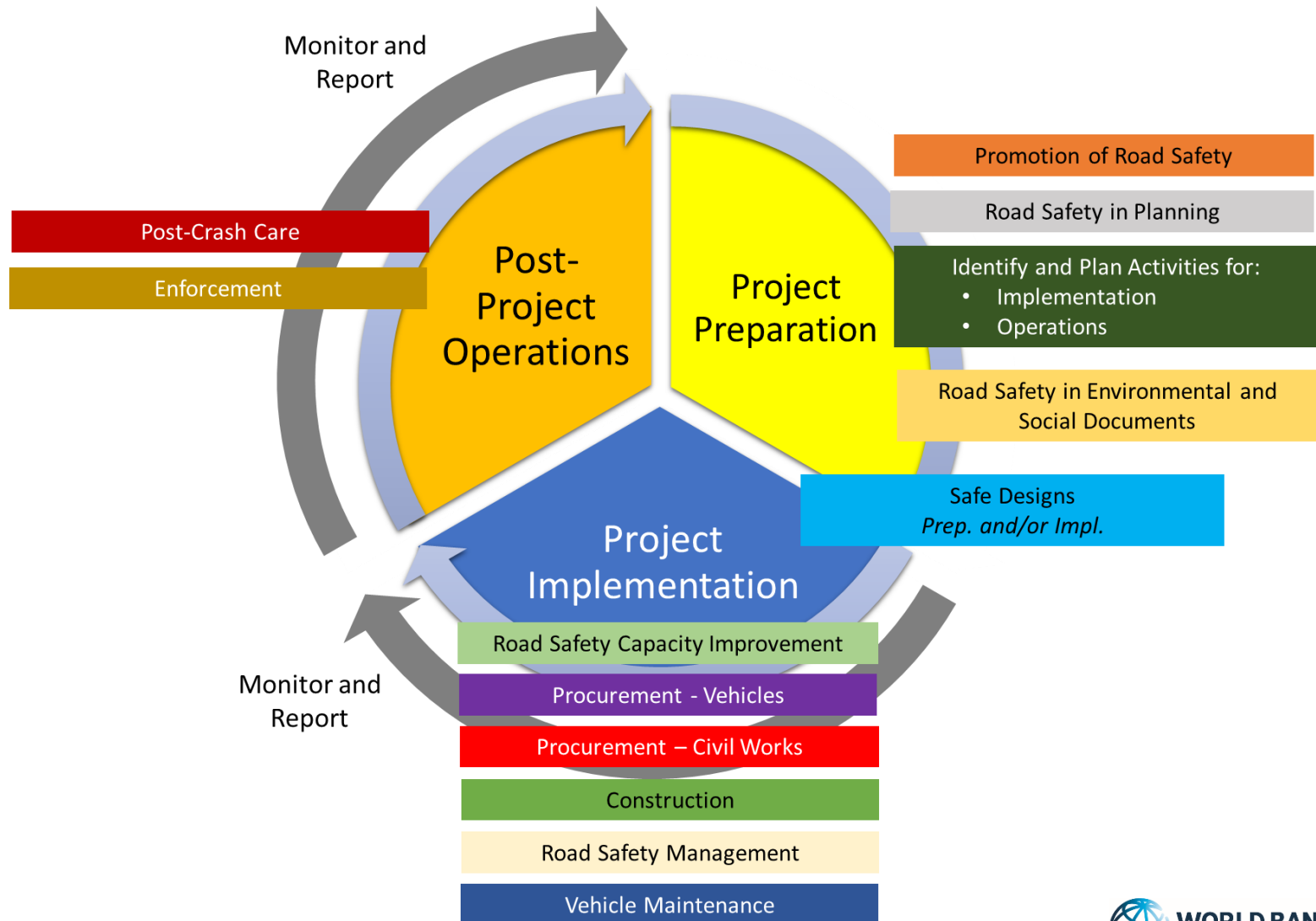


- GPN developed to guide World Bank staff on how to assist clients in implementing the requirements
- Structured around:
 - Preparation
 - Implementation
 - Operations
- Recommendations for IPF projects (not CDD, P4R, etc.)

Resources available at:

<https://tinyurl.com/rs-gpn-resources>

Road Safety in the Project Cycle



GPN Approach

Scope the Problem

Assess Options

Implement Mitigation Measures

Report on Performance

Scoping the Problem

Scope the Problem

Assess Options

Implement Mitigation
Measures

Report on Performance

Start of
Project

Scoping

PCN

Assessment

Environment
and Social
Documents

Appraisal

Types of Projects ESF Applies To



Type A: Transport Projects



**Type B: Non-Transport Projects Impacting
on Traffic Volume or Patterns
(e.g. new hospital)**

Types of Projects ESF Applies To

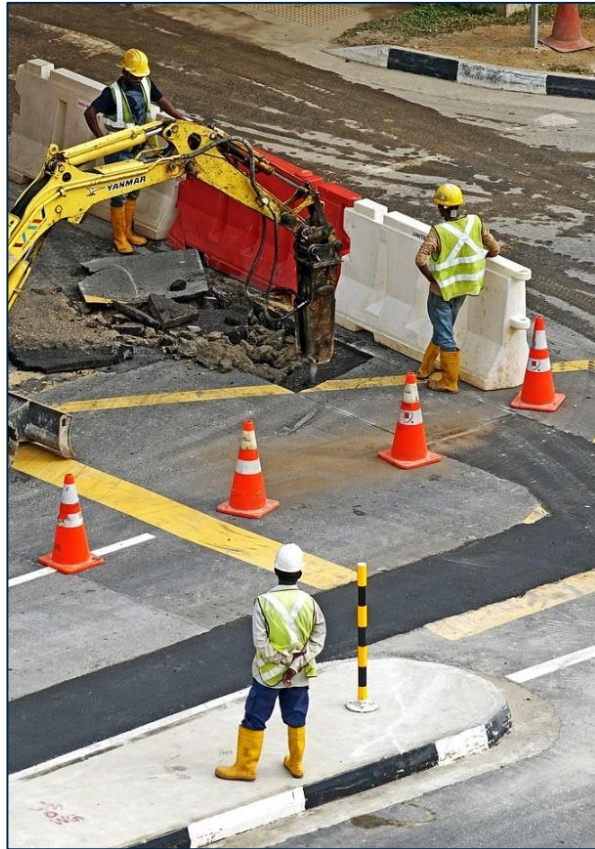


Type C: Construction Only



Type D: Vehicle Procurements

Who are Exposed to Risks



Project Workers



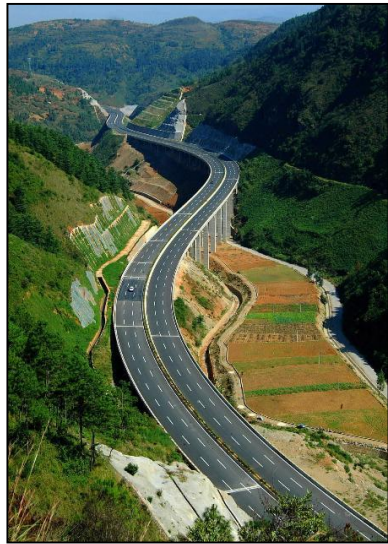
Local Communities



Road Users

Traffic and Road Safety Risks

Factors Influencing Overall Project Traffic and Road Safety Risk (OPTRSR)



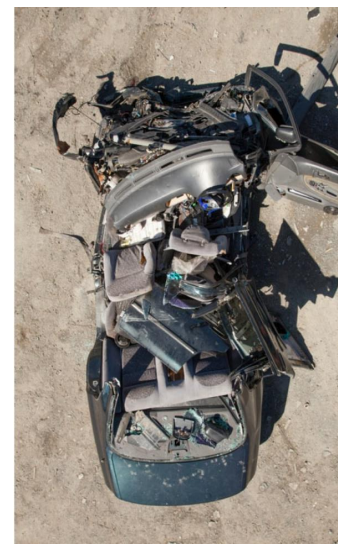
Infrastructure



Operating Speeds



Road Users



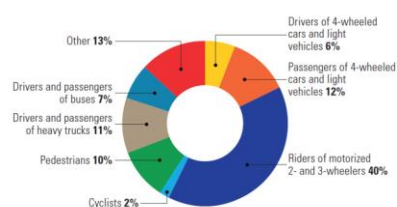
Vehicle Standards



Post-Crash Care

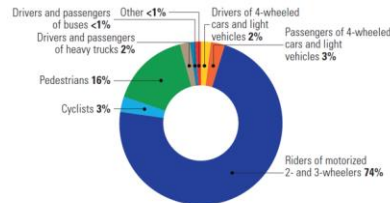
Vulnerable Users of Critical Importance

Pedestrians



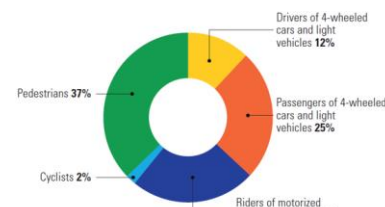
India: 52% Fatalities Vulnerable

Cyclists



Indonesia: 93% Fatalities Vulnerable

Motorcyclists

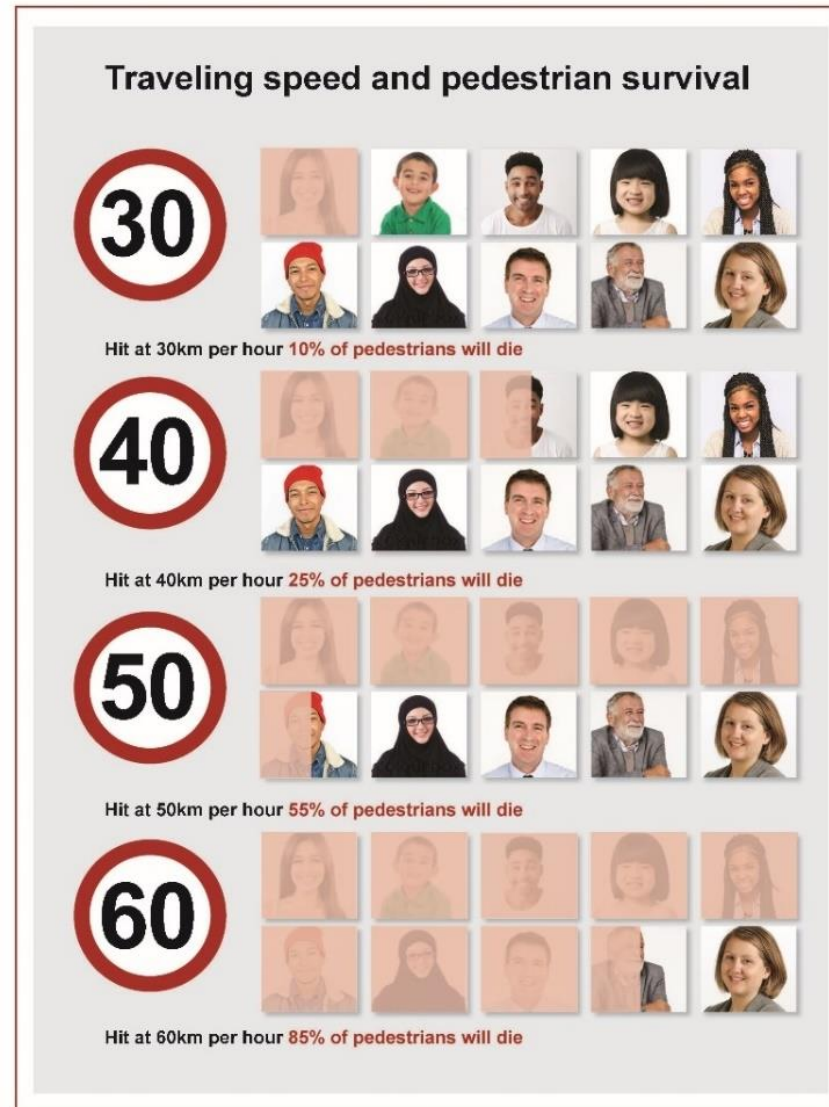


Kenya: 63% Fatalities Vulnerable



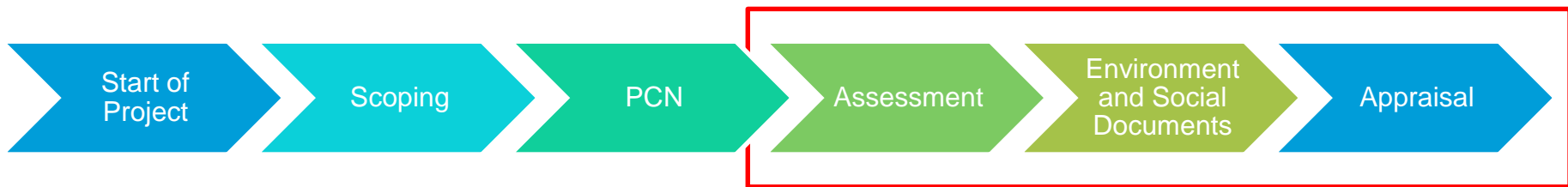
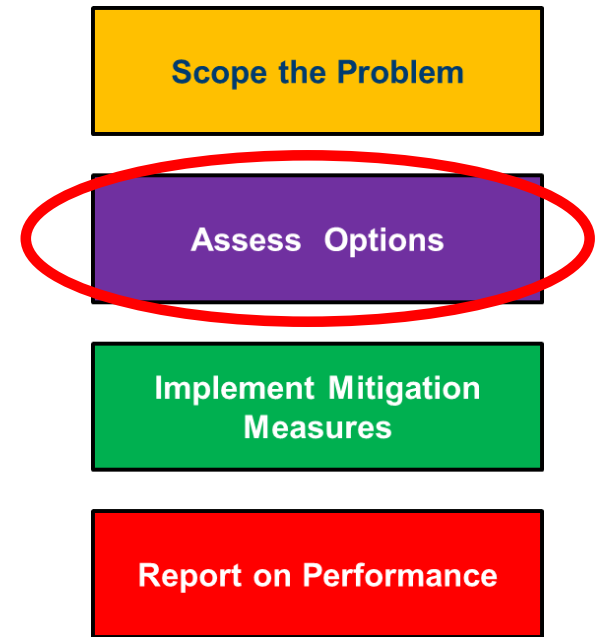
Uruguay: 70% Fatalities Vulnerable

30 km/h for Pedestrians and Cyclists



Source: Road Safety GPN

Assessing Options



Objective

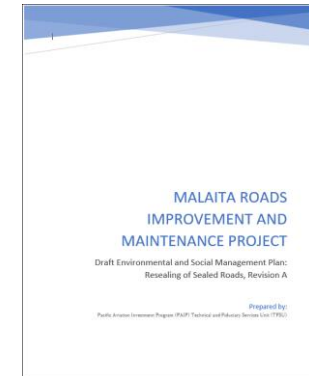
Assessment



Measure	
Loss of Control Crashes	Advisory Speeds
	Increased skid resistance
	Shoulder widening/paving
	Hazard removal
	Clear Zones
	Guardrails and end treatments
	Safety edges
Intersection Crashes	Realignment/improve geometry
	Reduce approach speeds by signs and visual measures
	Enforcement
	Reduce and removal of movements
	Improved lighting
	Provision of turn lanes
	Grade separation
Head-on Crashes	Replacing controlled intersections with roundabouts
	Lower speed limits
	Centerline treatments
	Enforcement
	Median barriers
	Median separation (e.g. concrete median)
	2+1 roads
Overtaking Crashes	Marked median treatments
	Audio/tactile pavement markings
	Improved signs/markings

Mitigation Measures

Measure	
Vertical deflection devices	Road humps
	Road cushions
	Flat top road humps
	Zebra crossing on a platform
	Raised intersections/pavements
Horizontal deflection devices	Lane narrowing
	Curb extension at intersections
	Slow points
	Centre blister islands
	Driveway links to residences
	Mid-block median treatments
	Roundabouts
Diversion devices	Full road closure
	Half road closure
	Diagonal road closure
	Modified 'T' intersection
	Left-in/ left-out islands
Signs, line marking and other treatments	Speed limit signs
	Reallocate road lanes to other modes
	Prohibited traffic movement
	One-way (street) signs
	Give Way signs

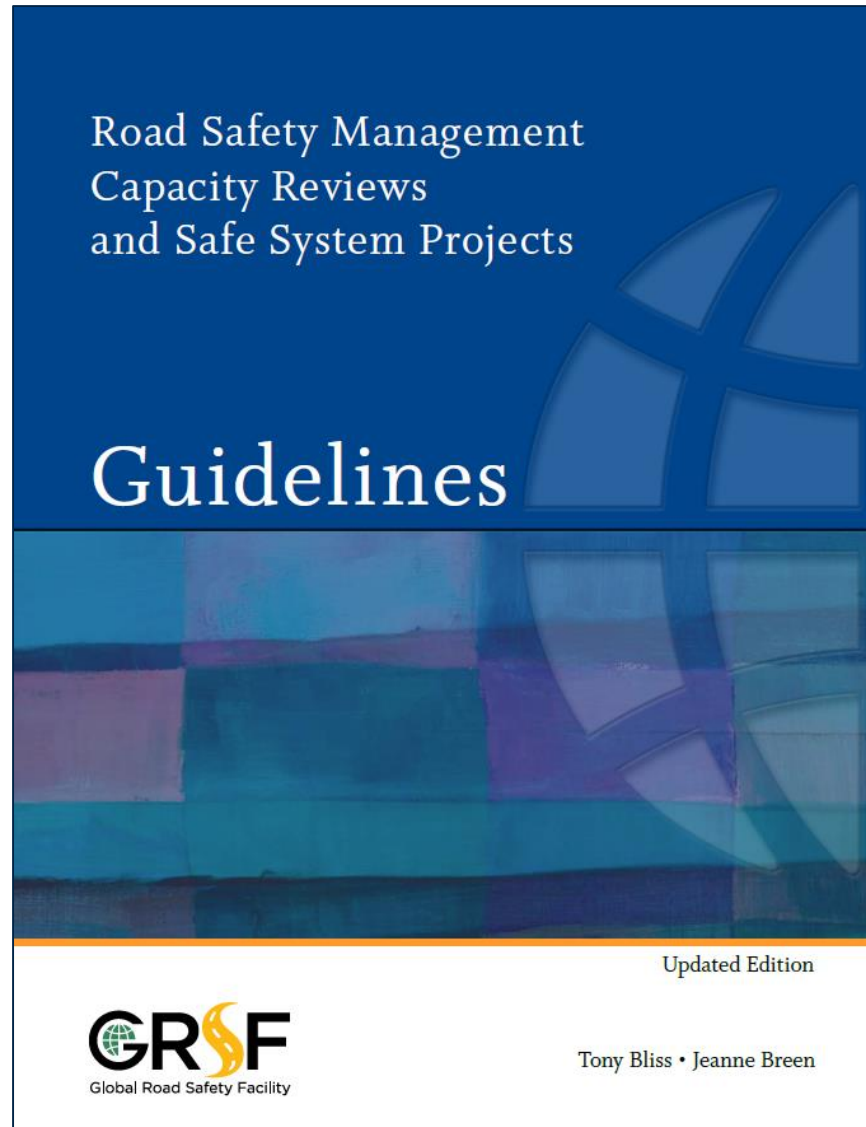


Environmental and Social Documents



Procurement Documents

Assessments - Institutions



Assessments - Infrastructure

iRAP Star Rating and Investment Plan Coding Manual

Drive on the right edition - August 2014

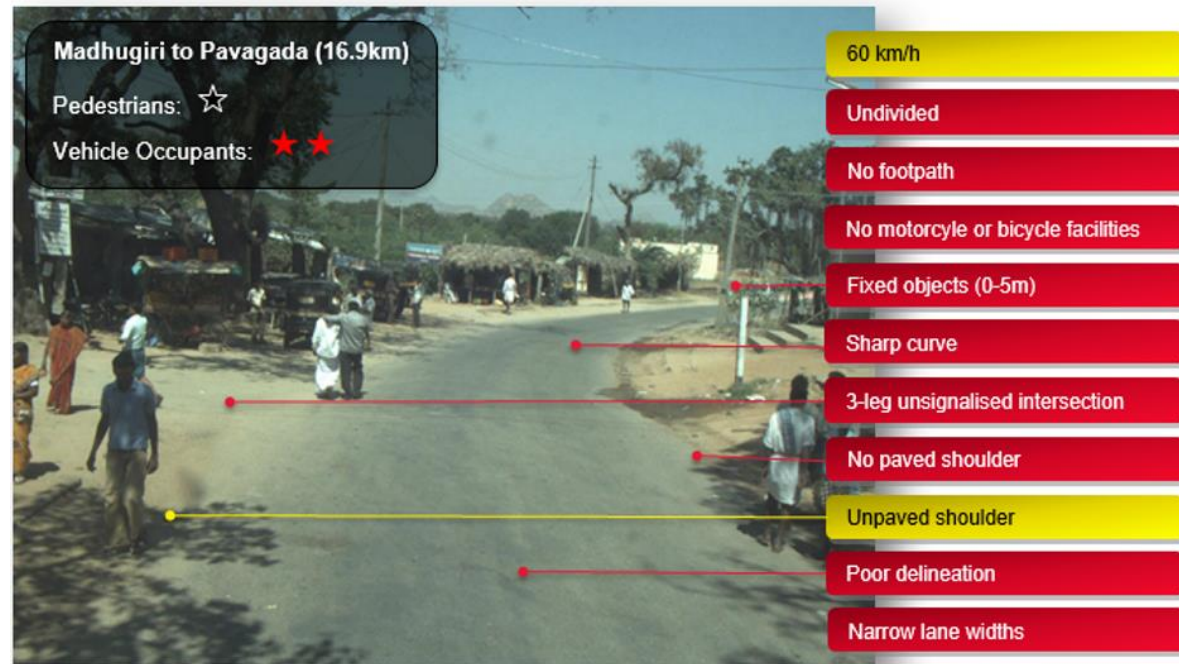


Setting the standards for the road coding process
RAP-SR-2.2

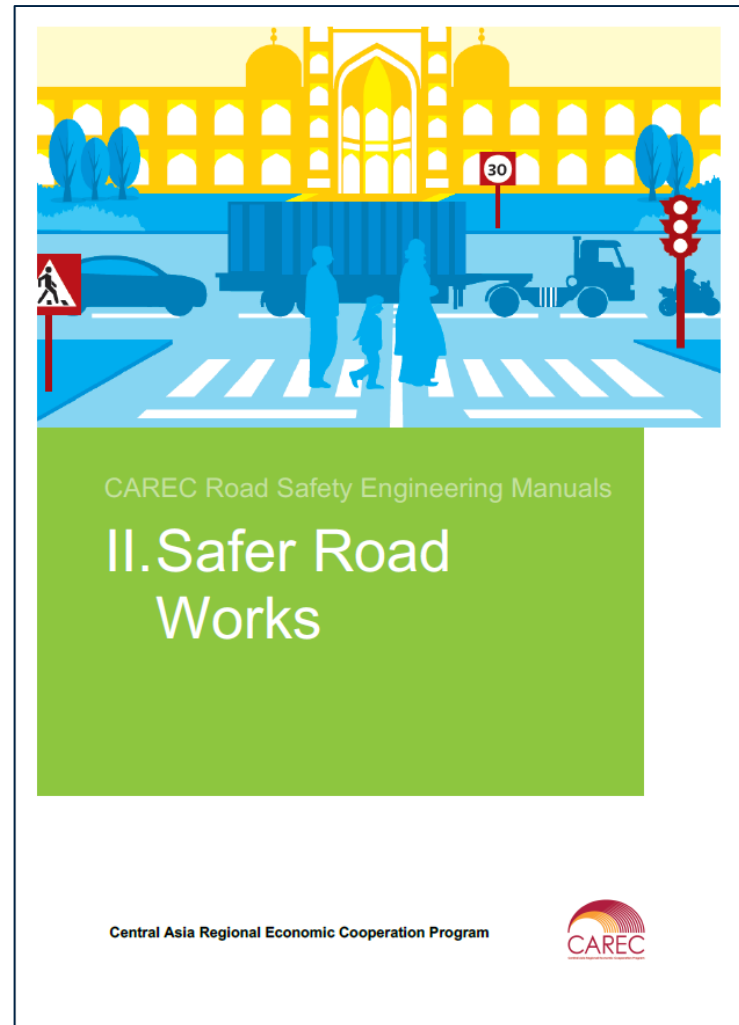
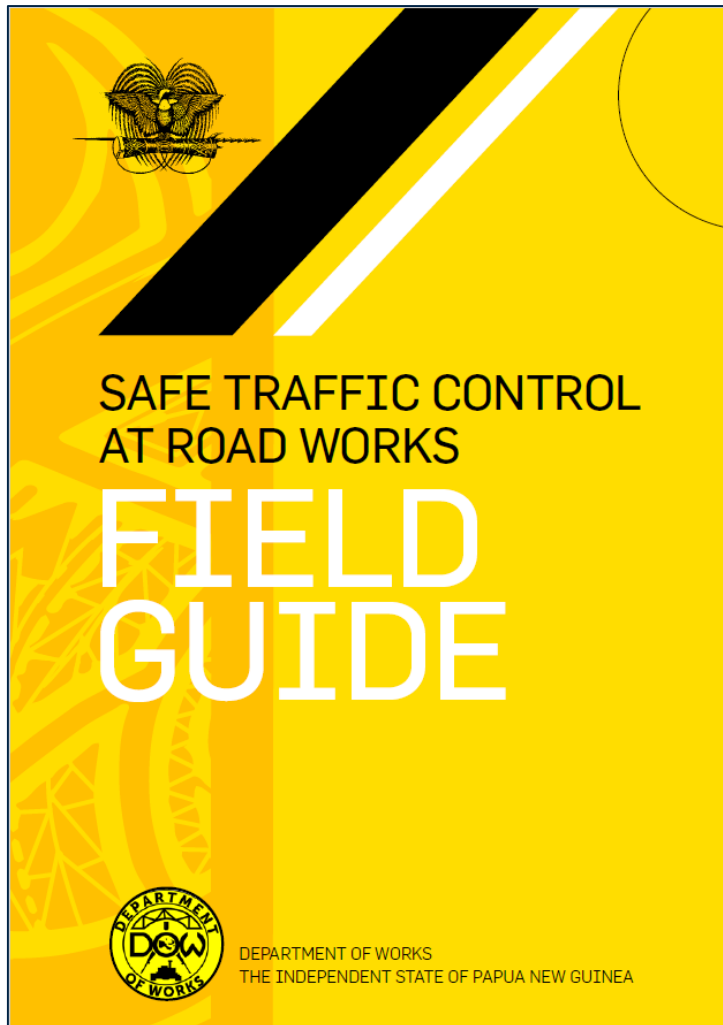
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Always refer to the electronic copy for the latest version at:

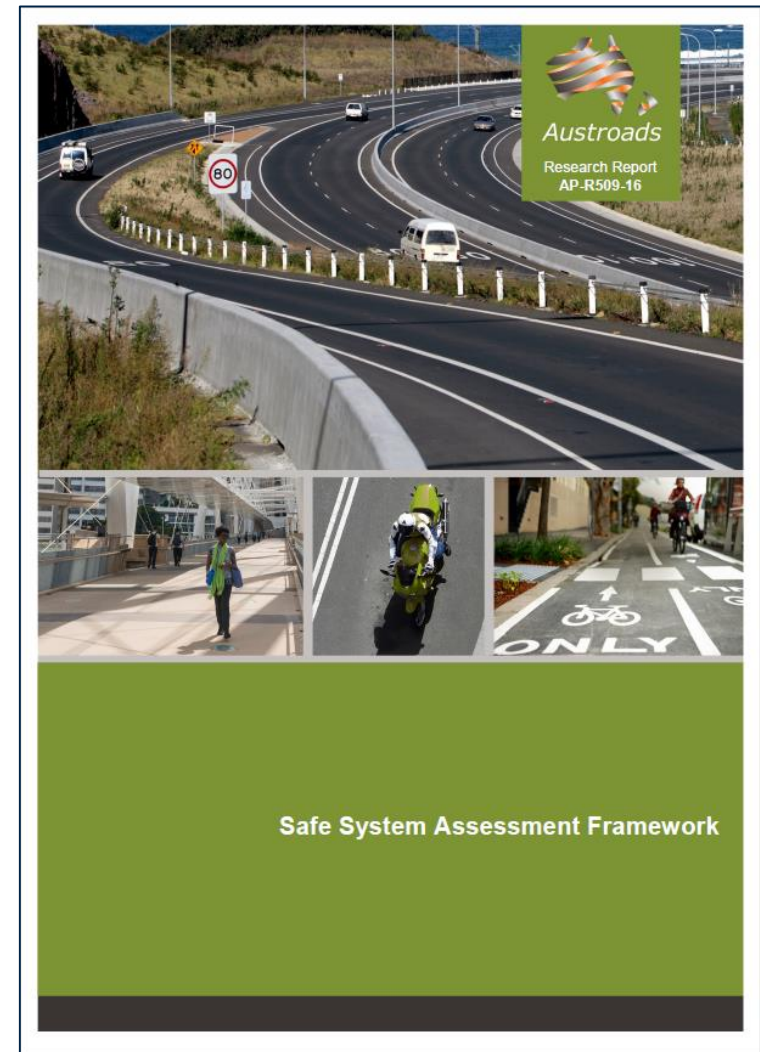
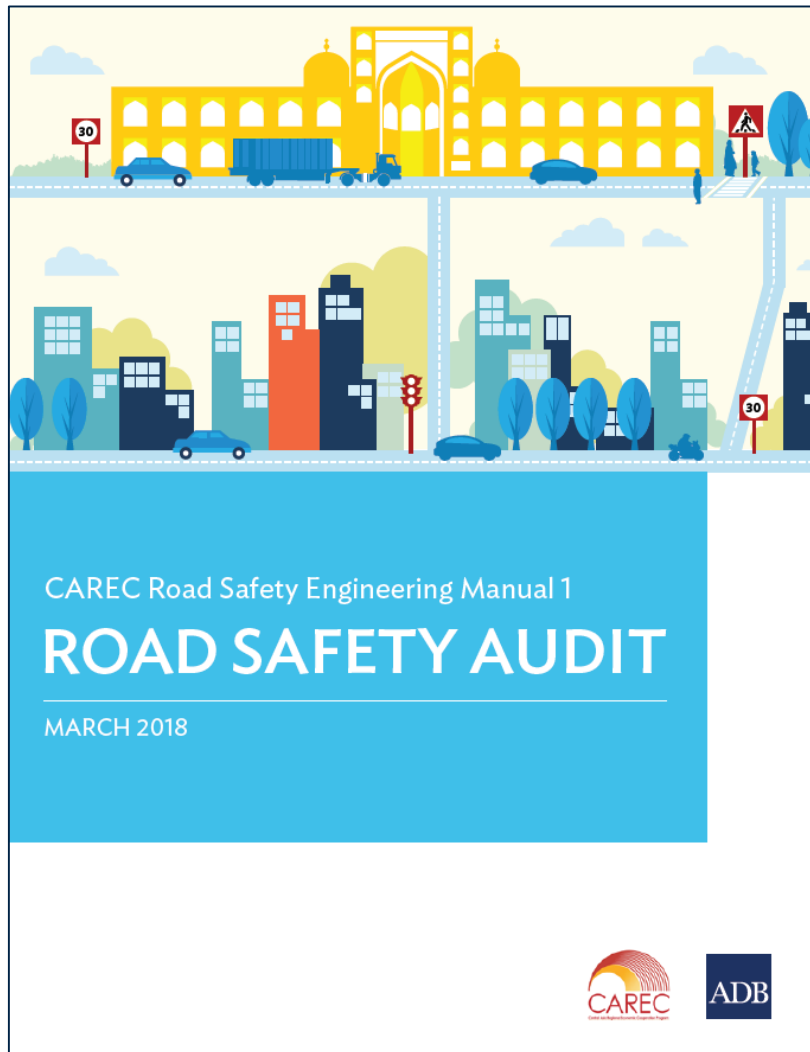
http://downloads.iRAP.org/docs/RAP-SR-2.2_Star_Rating_coding_manual.pdf



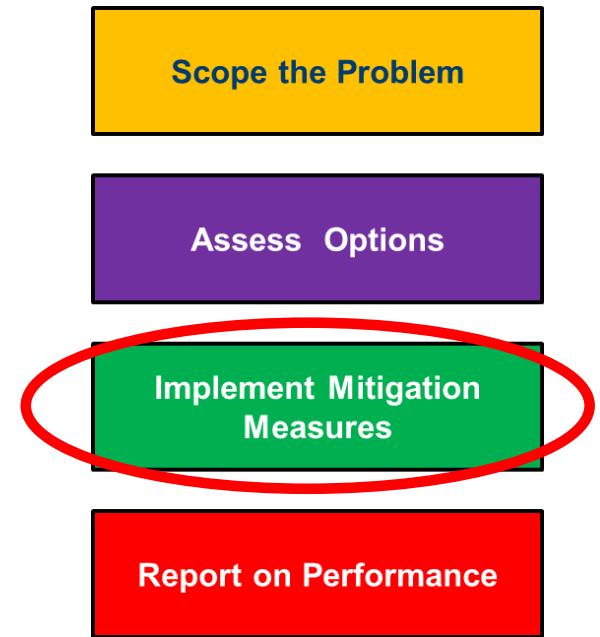
Assessments - Construction Safety



Assessments - Designs



Implement Mitigation Measures



Mitigation Measures

Road Safety Activity	Annex 2 Table with Mitigation Measures for the Activity	Project Phase ^{a/}			Targeted Group			Type of Project Applies To			
		Preparation	Implementation	Operations	Workers	Communities	Road Users	A: Transport	B: Other	C: Construction	D: Vehicles
Promoting the Road Safety Agenda	A2.1	✓	✓		✓	✓	✓	✓	✓	✓	
Road Safety in Planning	A2.1	✓				✓	✓	✓	✓		
Road Safety in the ESCP/ESMF/ESMP/RAP	A2.1	✓			✓	✓	✓	✓	✓	✓	✓
Road Safety Capacity Strengthening Opportunities	A2.2	~	✓		✓	✓	✓	✓	✓		
Safe Designs	A2.3	✓	✓			✓	✓	✓	✓		
Procurement – Civil Works	A2.4	~	✓		✓	✓	✓	✓	✓	✓	
Procurement – Vehicles	A2.4	~	✓			✓	✓	✓	✓		✓
Construction	A2.5	~	✓		✓	✓	✓	✓	✓	✓	
Road Safety Management	A2.6	~	✓			✓	✓	✓	✓		✓
Vehicle Maintenance	A2.6	~	✓			✓	✓	✓	✓		✓
Enforcement	A2.7	~	♦	✓		✓	✓	✓	✓		✓
Post-Crash Care	A2.7	~	♦	✓		✓	✓	✓	✓		

Notes: ^{a/} ~ Indicates that the design of the activity is done during Preparation. ♦ That there will be overlap with the Operations Phase.

Solutions - Safe Vehicles

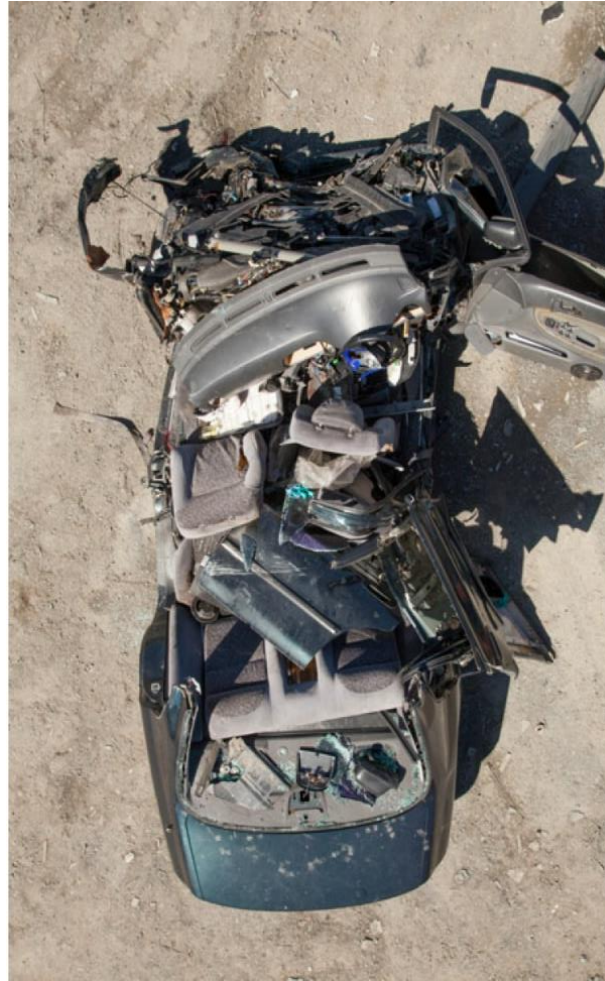
40

countries implement
7 or 8 of the priority
UN vehicle safety
standards

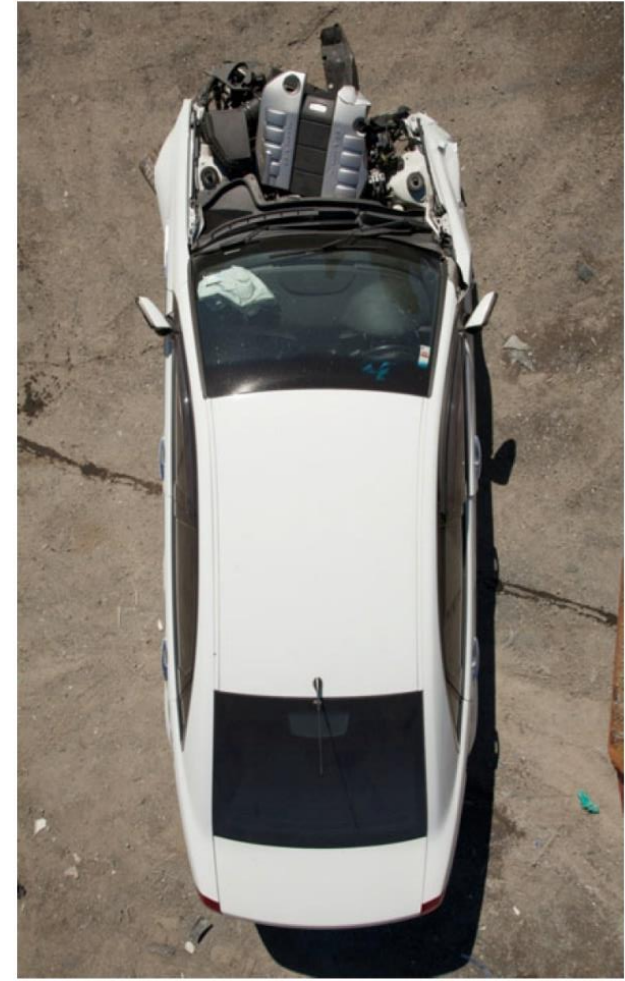
124

countries apply 0 or 1 of
the 8 priority UN vehicle
safety standards

*Source: 2018 WHO Global Status
Report on Road Safety*



NCAP 1 Star Car



NCAP 5 Star Car

Safe Designs

	Number	Project Type	Action to Address Traffic and Road Safety Risks	Good Practice Activities and Mitigation Measures	Potential Results Indicators	Who is Responsible for Action	Should this Action be Considered by Risk Level			
							Low	Moderate	Substantial	High
		Safe Designs								
	12	A, B	Use a design RSA ³⁶ prior to designs being completed and procurement starting to confirm that road safety concerns are identified, positive practical safety features have been properly incorporated into the detailed designs, and that the road is safe for the changes in traffic volume and mix anticipated.	<ul style="list-style-type: none">Ensuring safety ratings and audits of designs are undertaken and recommendations for safety improvements are adopted.Conduct SSA to confirm all Safe System opportunities are realized.Identified issues should be addressed.	<ul style="list-style-type: none">Safety rating.Safety audit compliance.Crash fatalities and serious injuries.	<ul style="list-style-type: none">IATask Team to review RSA and SSA findings and confirm IA responds reasonably to all audit report recommendations				
	13	A, B	<p>Project designs need to capture opportunities for speed management³⁷ through road design and traffic calming measures that limit speeds to safe operating levels. Operating speeds need to remain safe for any changes in traffic volume and mix anticipated.</p> <p>Review proposed speed limits and designs on project roads so that that the operating speeds are consistent with a Safe</p>	<ul style="list-style-type: none">Adopt speed management interventions aimed at controlling the operating vehicle speed and not relying on the posted speed limit.Identify opportunities to control operating speeds not just by speed through traffic calming features to manage speeds (such as speed humps, speed cushions, chicanes, raised platform crossings, roundabouts, narrowed lane markings).	<ul style="list-style-type: none">Number of speed managing devices installed.Percentage of pedestrian crossings at which speeds are managed down to 30km/h by effective speed managing infrastructure.Safe crash impact speed thresholds.	<ul style="list-style-type: none">IA through the design engineer				

Sample - Urban Road Interventions

Measure		Applies to Local and/or Arterial Roads	Reduce Speeds	Reduce crash risk	Increase pedestrian safety	Increase bicycle safety	Reduce traffic volume
Vertical deflection devices	Road humps	L	✓	✓	-	✓	-
	Road cushions	L	✓	✓	✓	✓	-
	Flat top road humps	L	✓	✓	✓	✓	-
	Zebra crossing on a platform	L / A	✓	✓	✓	✓	✓
	Raised intersections/pavements	L / A	✓	✓	✓	✓	-
Horizontal deflection devices	Lane narrowing	L / A	✓	-	-	-	✓
	Curb extension at intersections	L / A	✓	✓	✓	-	✓
	Slow points	L	✓	-	-	✓	-
	Centre blister islands	L / A	✓	-	-	✓	✓
	Driveway links to residences	L	✓	✓	✓	✓	✓
	Mid-block median treatments	L / A	✓	✓	✓	-	✓
	Roundabouts	L / A	✓	✓	-	✓	-
Diversion devices	Full road closure	L	-	✓	✓	✓	✓
	Half road closure	L	-	✓	✓	✓	✓

Report on Performance

Scope the Problem

Assess Options

Implement Mitigation
Measures

Report on Performance


Incidents During Construction

Classification	Characteristics	Reporting
Indicative	<ul style="list-style-type: none"> Relatively minor and small-scale localized incident that negatively impacts a small geographical areas or small number of people Does not result in significant or irreparable harm. 	IA / SE to report within the next monthly/bi-monthly Report
Serious	<ul style="list-style-type: none"> May cause significant harm to the environment, workers, communities, or natural or cultural resources; Is complex or costly to reverse and may result in some level of lasting damage or injury; Consistent failure by the Contractor to comply with C-ESMP requirements or failure to remedy C-ESMP non-conformances; which could result in significant impacts. Examples include: <ul style="list-style-type: none"> Injuries requiring off-site medical attention; significant adverse effects or damage to private property (e.g. vehicle accident) 	IA / SE to report within 48 hours
Severe	<ul style="list-style-type: none"> May cause great harm to individuals. Requires an urgent and immediate response. Is complex and may be expensive or impossible to remedy and is likely irreversible. Examples include: <ul style="list-style-type: none"> A fatality A serious injury requiring immediate hospitalization 	IA / SE to report immediately and, in any event, within 24 hours.

Incidents During Operations

← → ↺ 🏠 <https://www.itf-oecd.org/IRTAD> ☆

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International Traffic Safety Data and Analysis Group (IRTAD)

IRTAD

International Traffic Safety Data and Analysis Group (IRTAD)

[Group Activities](#)

[Members](#)

[IRTAD Road Safety Database](#)

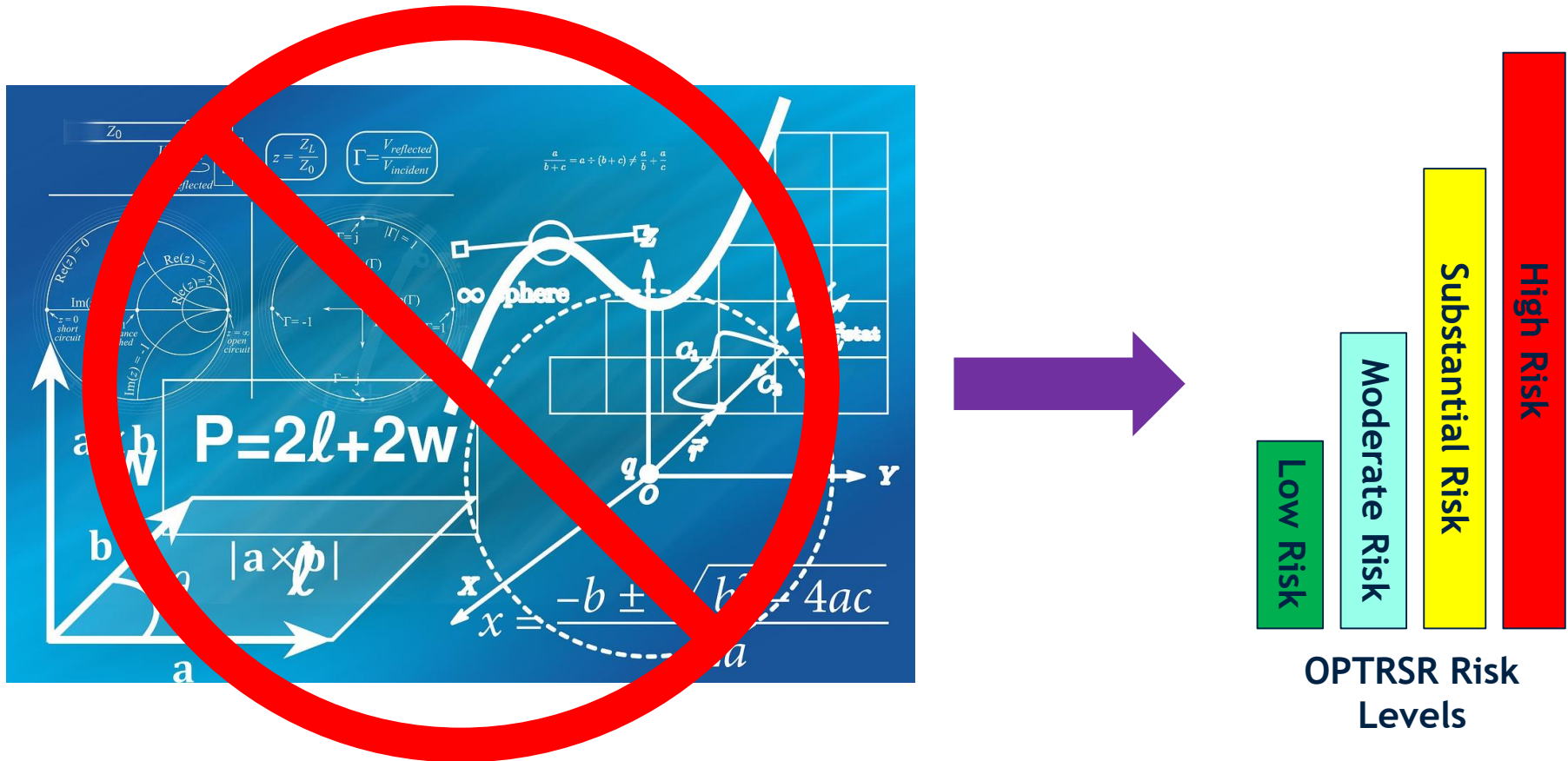
[Publications](#)

[Contact IRTAD](#)

Almost 1.25 million people are killed on the world's roads every year, and tens of millions are seriously injured. Through its permanent working group on road safety, known as IRTAD, ITF aims to advance international knowledge about road safety and contribute to reduce the number of traffic casualties. With 80 members and observers from more than 40 countries, IRTAD has become a central force in the promotion of international co-operation on road crash data and its analysis. It has been hailed as "model of a multi-country effort" and its crash data described as "simply the best in the world".



Estimating the risk: Judgement Required!



Use a **precautionary approach**: When in doubt **assume a higher risk**

Questions?

[http://pubdocs.worldbank.org/en/648681570135612401/
Good-Practice-Note-Road-Safety.pdf](http://pubdocs.worldbank.org/en/648681570135612401/Good-Practice-Note-Road-Safety.pdf)





THE ROAD SAFETY SDGs POST-2020: TANGIBLE ACTIONS TO PROMOTE GREATER GOVERNMENT

PRESENTER'S:

**MR WONG YAU DUENN
DEPUTY DIRECTOR GENERAL
ROAD SAFETY DEPARTMENT MALAYSIA**



Asia-Pacific
Economic Cooperation

THE CURRENT SCENARIO

DATA FOR 2018

DEATHS

6,284 deaths

**17 deaths on the road
in a day**

**1 death on the road
in every 80 minutes**

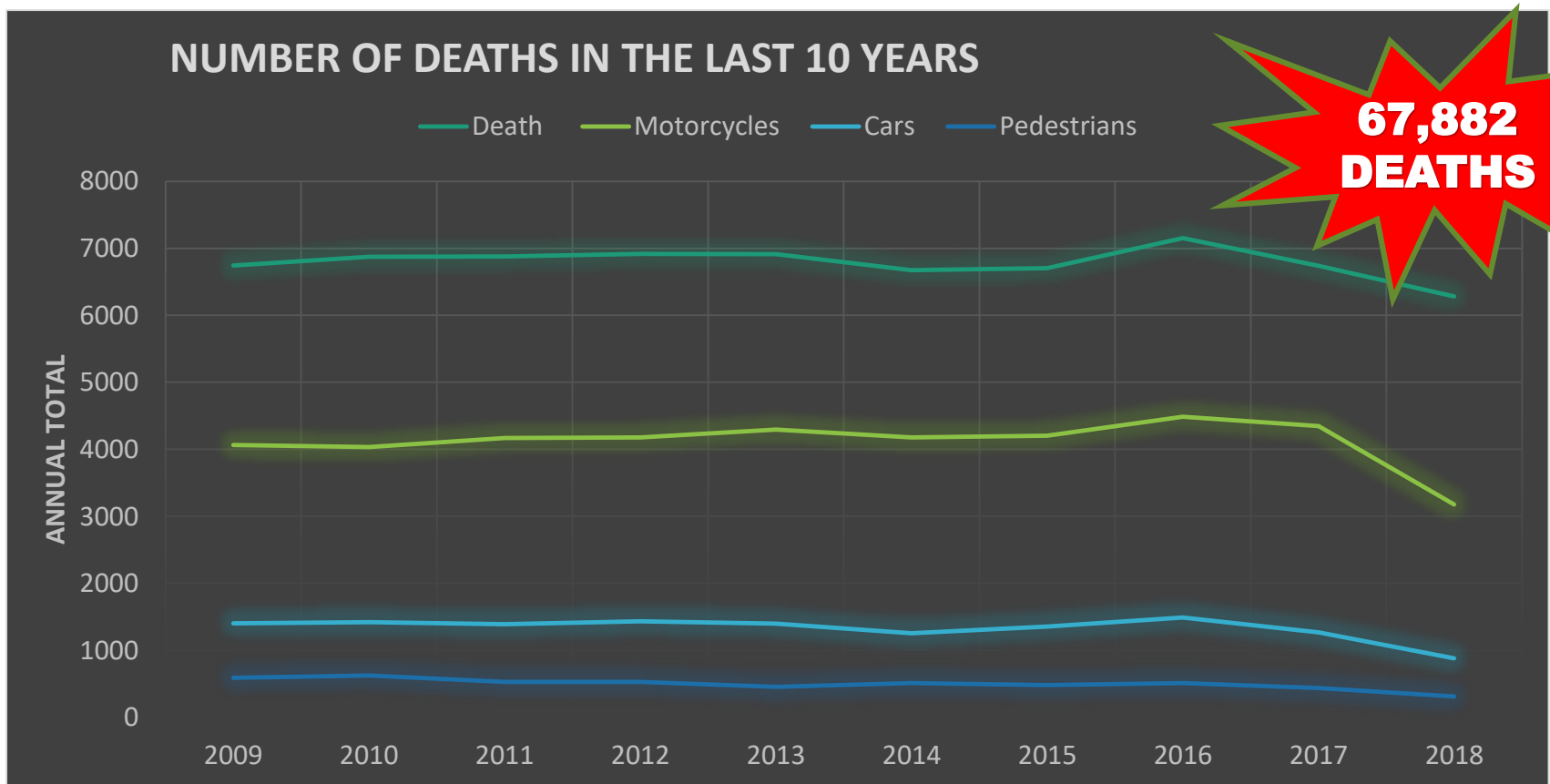
ACCIDENTS

547,348 reported crashes

**1,500 reported cases
in a day**

**1 reported case
in almost every minute**

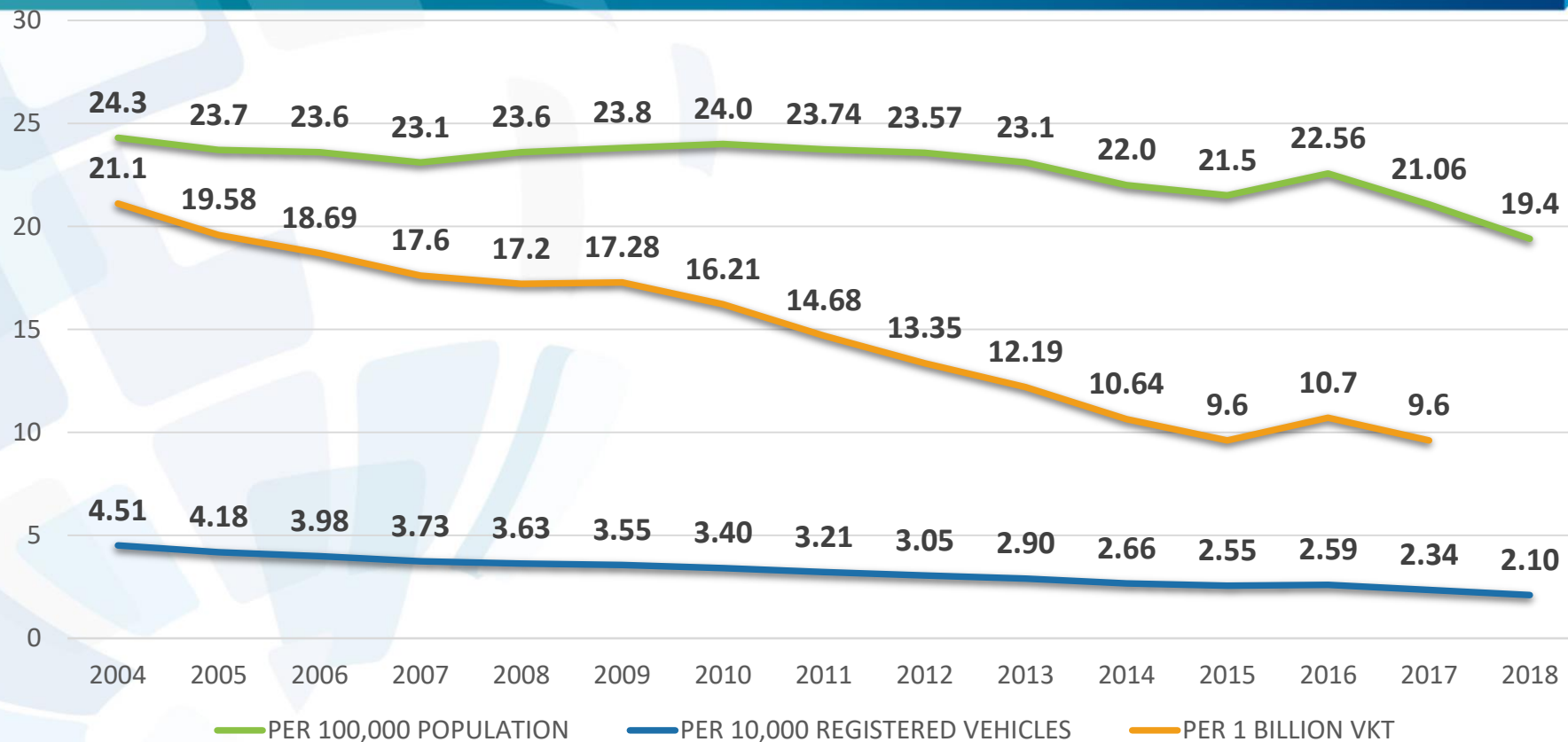
THE CURRENT SCENARIO



ROAD TRAFFIC FATALITY INDEX (2004-2018)



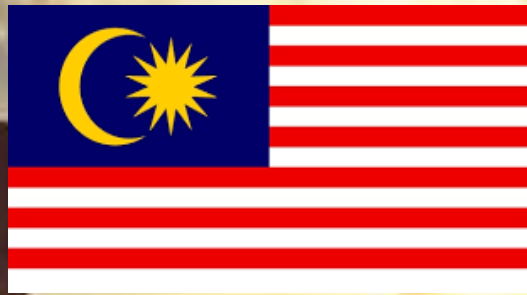
Asia-Pacific
Economic Cooperation





ROAD SAFETY CHALLENGES

- **Stringent budget for implementation on road safety initiatives**
- **Need innovative approach to change public behavior towards road safety**
- **Centralizing the road safety implementation, evaluation and intervention**



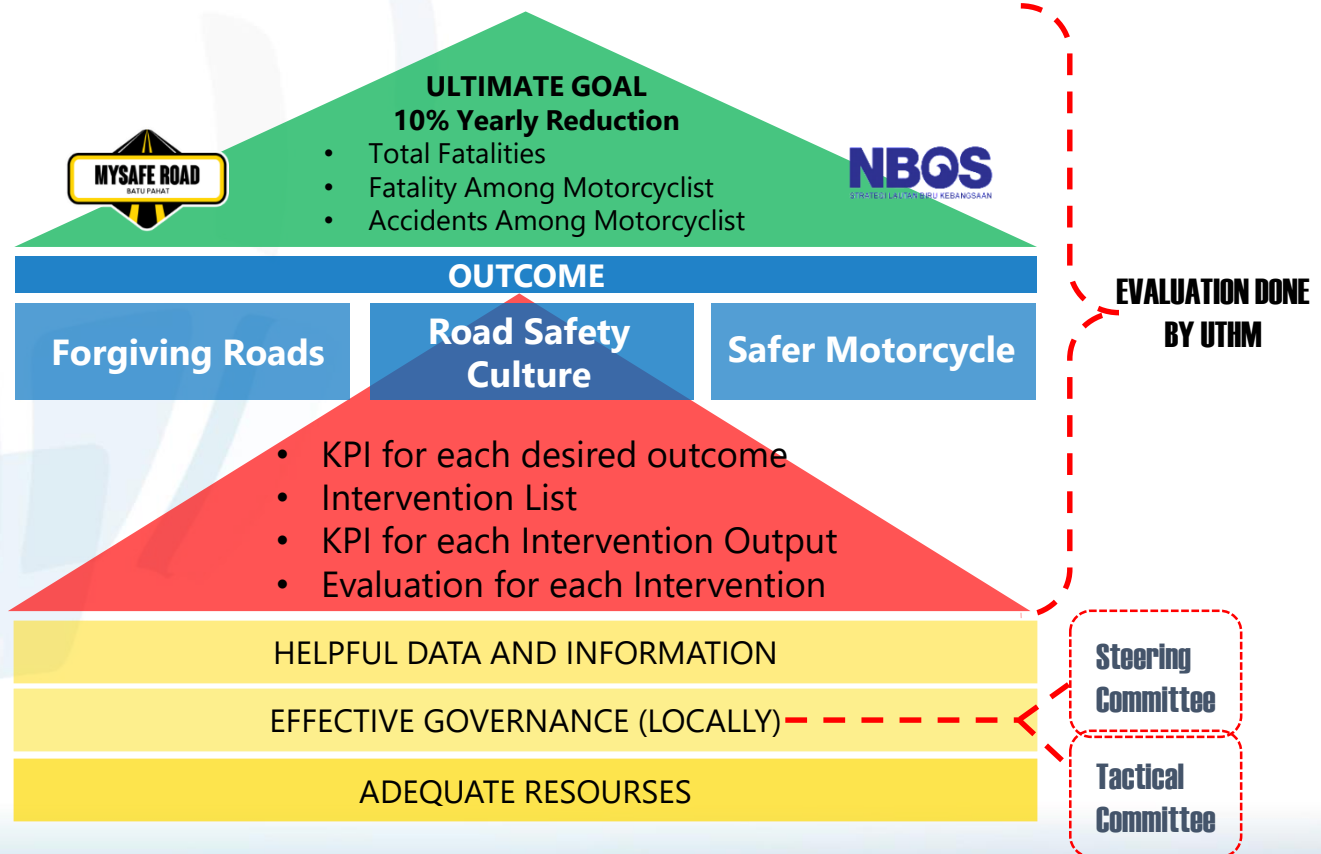
ROAD SAFETY INITIATIVES IN MALAYSIA

NATIONAL BLUE OCEAN STRATEGY IN ROAD SAFETY STRATEGY- LOCALITY & OUTCOME BASED APPROACH



Asia-Pacific
Economic Cooperation

*FEB 2017 – NOV 2017 (Implementation will be monitored by UTHM)
DEC 2017 – FEB 2018 (Impact Assessment Study by UTHM)*



- ✓ Will be start in February 2020
- ✓ Comprise elements:
 - Advocacy and public awareness
 - Enforcement
- ✓ Engagement with Putrajaya community involvement
- ✓ Aim to create high impact on road safety awareness among Putrajaya residents



COMMUNITY BASED ROAD SAFETY PROGRAM IN PUTRAJAYA



COMMUNITY BASED ROAD SAFETY PROGRAM IN PUTRAJAYA



©Copyright



KIDZANIA GO (STOP,LOOK,WAVE)

57,774 kids

260 schools

37 community
events



STOP

Stop at the Crosswalk
and wait until there is no
approaching vehicles.



LOOK

Stay away from the blind spots.
Seek eye contact with the
driver when he or she has stopped.



WAVE

Wave to the driver
before you cross
the road.



Thank you

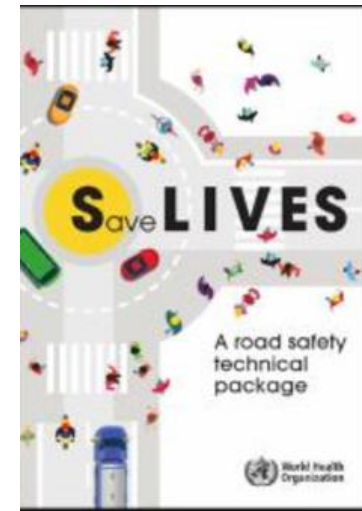


Strategic Communication for Road Safety in BIGRS: Experience and Opportunities

Tom Carroll
Kuala Lumpur, October 30, 2019

Mass Media Campaigns

- Mass media campaigns coordinated with enforcement can play ***an essential role*** in addressing risky road user behaviors, operating as an integrated component of a system approach.
- Road safety campaigns have an estimated overall significant ***crash-reduction effect*** of 9%. Campaigns ***incorporating enforcement*** strategies to deliver their message are associated with greater crash reductions.
[Phillips et al. 2011].




























Cities where Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) is Operating

Only 54% of vehicles but 90% of road deaths occur in lower and middle-income countries.



Campaigns in BIGRS Cities

	Helmets	Drink driving	Seatbelts	Speeding
Addis Ababa				
Accra				
Bandung				
Bangkok				
Ho Chi Minh City		 		
Mumbai				
Shanghai				
Bogota				
Fortaleza				
Sao Paulo				

VIDEO: Drink driving, HCMC



VIDEO: Helmet wearing, Bandung



Generating Earned Media

Media stories can play a key role by:

- Amplifying campaign messages
- Highlighting enforcement efforts
- Shaping the narrative of road safety as a public health issue
- Telling personal stories
- Raising salience of road safety issues on the public agenda

The Power of Personal Stories



Challenges and Opportunities

- Mass media campaigns need to be identified as a key element of a city's ***comprehensive road safety strategy***.
- A government agency that has a ***clear mandate for road safety mass communication campaigns*** should be identified.
- The agency needs to have ***adequate internal capacity***: communication professional(s) with mass media and PR expertise should be responsible for developing and managing campaigns.

Challenges and Opportunities

- Campaigns **should be data-driven**, evidence based and guided by formative research with target audiences
- Campaigns should employ a mix of integrated **multi-channel communication** approaches
- Campaign planning and implementation should be closely linked with **enforcement**
- High-quality **vendors** should execute the campaign
- ***A pool of dedicated journalists*** should be formed, maintained and continually educated on road safety issues

Sustained Funding is the Critical

- ***Sustained funding*** for campaign development, implementation and evaluation is critical to achieving maximum contribution of road safety campaigns
- Funding should be ***adequate*** for campaigns to be able to achieve ***high levels of reach, frequency*** of exposure degree of ***engagement*** with specific target audiences
- A sustainable ***funding mechanism*** from government and stakeholder organizations such as insurance companies should be established to allow for ***confident strategic planning*** of campaign phases and ongoing strategic communication.

Thank you!



**World Health
Organization**

Engaging parliamentarians in improving road safety

**Ms Rattanaporn (Tum) Tangthanaseth
WHO Thailand**

2019 Asia Pacific Road Safety Seminar

**30 October 2019
Kuala Lumpur, Malaysia**

From challenges to a new initiative

“Global Network for Road Safety Legislators”



Some roles for parliamentarians

- Support the **UN Decade of Action for Road Safety** and **SDGs**
- Strongly support and encourage **road safety leadership**
- Encourage adoption of the **Safe Systems Approach**
- Review national policy and legislation and support the implementation of the recommended **priority interventions in the WHO SaveLIVES package**
- Support policies that promote **road safety at work**

**Global Network for Road Safety Legislators
Leadership Council**
(Dec 2016)

WHO HQ
(secretariat)

**African
Regional Network**
(Jul 2018)

**Chairs
&
Vice-Chairs
of the
Regional
Networks**

**ASEAN/WHO-SEA
Regional Network**
(Aug 2019)

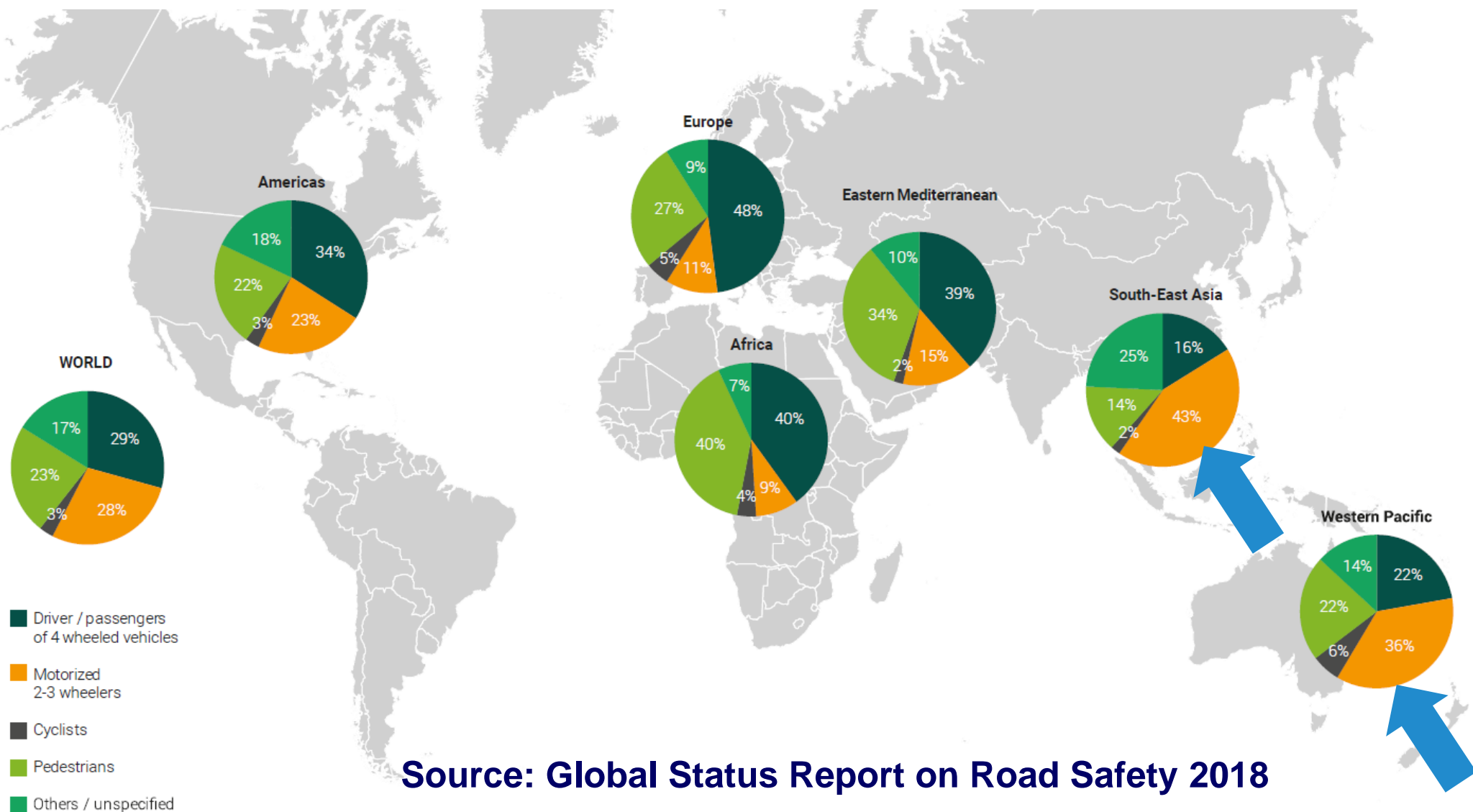
**Eastern
Mediterranean
Regional Network**
(Sep 2018)

**Latin America
Regional Network**
(Sep 2019)

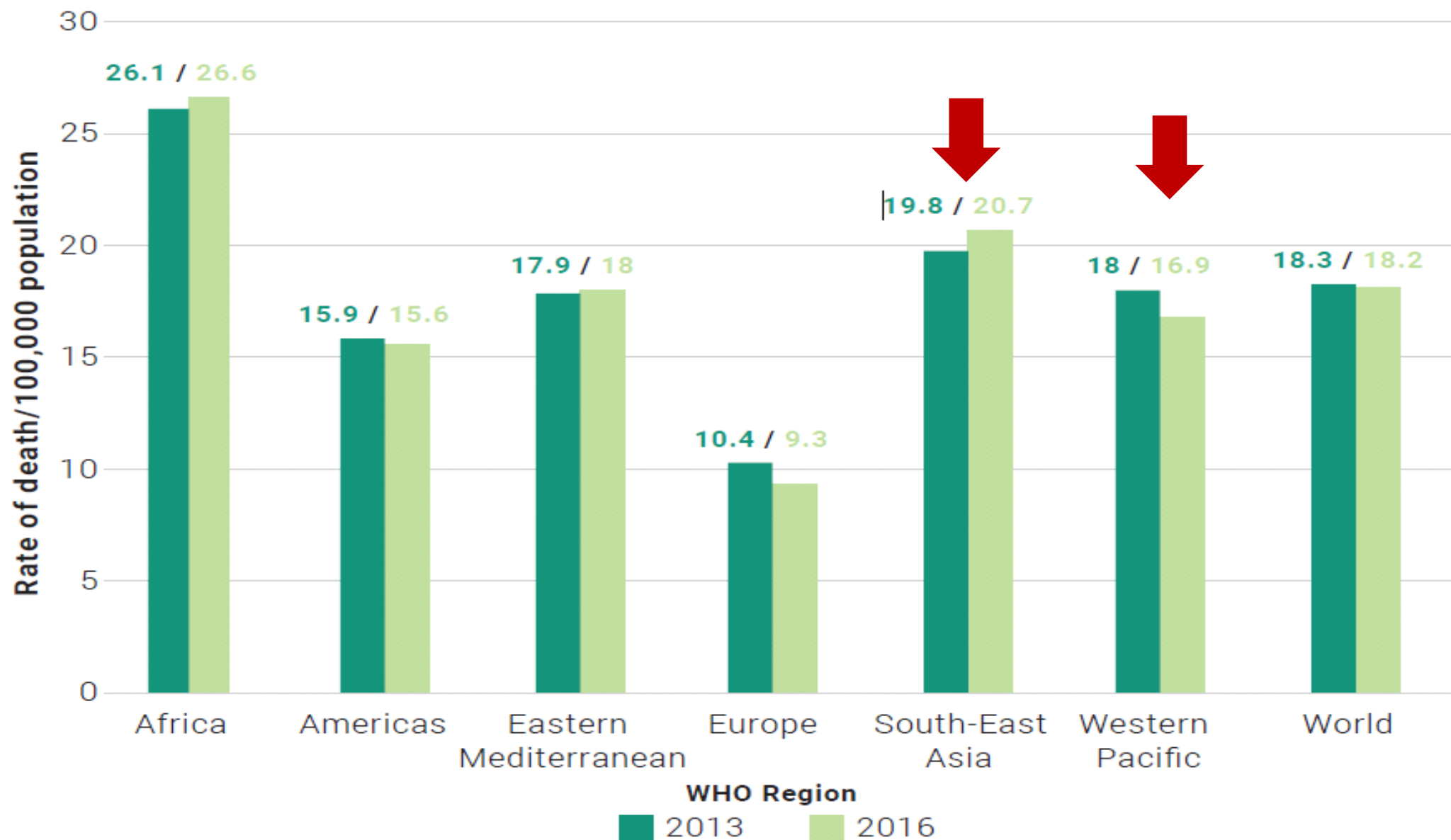
Aims of Regional Networks

- Draw attention to road safety issues that are relevant to their regional context
- Share solutions across countries in the same region
- Serve as Regional Chapters of the Global Network for Road Safety Legislators
- Unite regional voices of MPs at the Leadership Council of the Global Network

Deaths by road user types vary by region



Road traffic death rates per 100,000 population by WHO regions in 2013 and 2016



ASEAN-WHO South-East Asia Regional Network

- Launched in August 2019, the Network aims to put more attention to deaths among VRUs, especially motorcycle riders.
- Mechanisms to address road safety were set up in the Thai Senate and House of Representatives
- A forum for Thai parliamentarians to exchange knowledge and experiences with MPs from UK and Australia



Leveraging further impact in 2020 and beyond

- **Global level**

- Unite voices of MPs at the annual meeting of the Leadership Council of the Global Network (Stockholm, Sweden) and at the next UN General Assembly debate in 2020
- Encourage the development of a regional chapter where one does not exist
- Co-operate with the Commonwealth Parliamentary Association and engage with the Inter-Parliamentary Union

Leveraging further impact in 2020 and beyond

- **Regional level**

- Build capacity and promote exchanges of best practice between MPs in the region
- Advocate for and encourage discussions of road safety issues through other existing parliamentarian mechanisms (e.g. the Asia Pacific Parliamentarian Forum on Global Health, ASEAN Inter-Parliamentary Assembly)

Leveraging further impact in 2020 and beyond

- **Country level**
 - Identify potential champions in the parliament
 - Engage potential MPs in road safety advocacy activities
 - Create mechanisms through which stakeholders can inform/support/advocate for MPs on road safety issues
 - Promote the Parliamentary Friends of Road Safety
 - Link MPs with the regional network

To join the network

http://apps.who.int/datacol/survey.asp?survey_id=720



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The Global Network for Road Safety Legislators



About

Useful links

- WHO's work on road traffic injuries
- Global Status Report on Road Safety 2018*
- Global targets for road safety risk factors and service delivery mechanisms
- UN Road Safety Collaboration
- Global Forum for Road Traffic Safety (WP.1)
- World Forum for the harmonization of vehicle regulations (WP. 29)
- UN Road Safety Trust Fund
- International Transport Forum
- SSATP Africa Transport Policy