

GUIDELINES FOR CONDUCTING ROAD SAFETY DATA REVIEWS

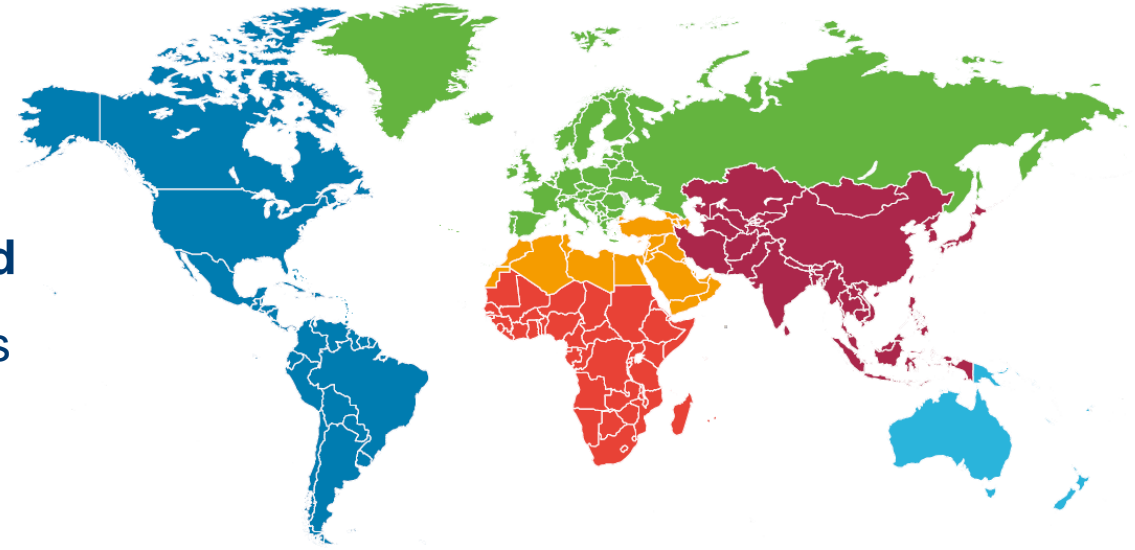
WBRSO technical committee RS
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> Data Challenge

- **Varying degrees of underreporting, completeness and lack of meaningful analysis** for road safety interventions
- **Lack of standardization and integration** of multiple datasets, definitions, and collection methods
- Need for streamlining of processes, leveraging technology, bridging gaps in capacity and resources, and addressing barriers in notification of fatalities and injuries
- **Road safety indicators** are not used (e.g. speed, drink-driving, safety equipment)



GLOBAL TOTALS:

Number of countries

175

Total population
(000s)

7 296 943

Total reported deaths

629 365

Total WHO estimation

1 323 666

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DECEMBER 2021

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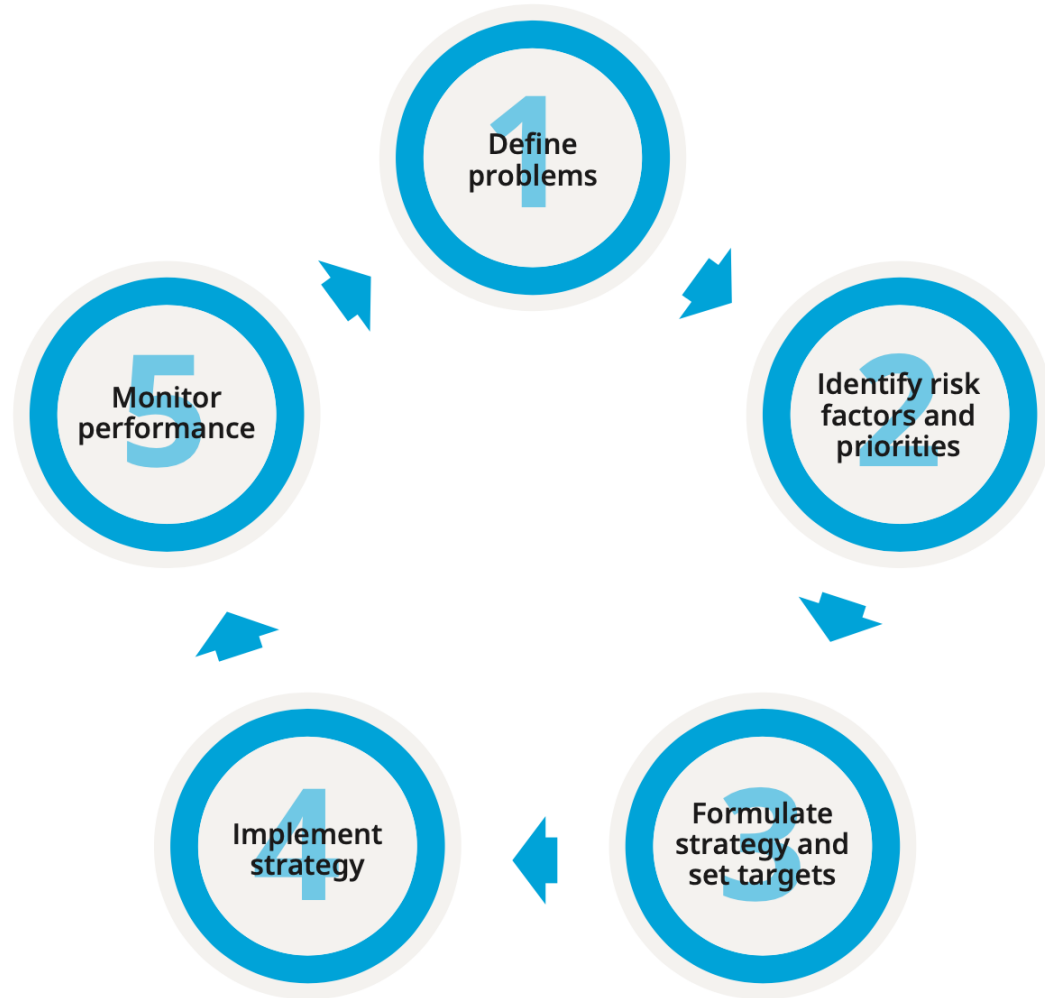
Objectives

- Support review teams in the assessment of road safety data collection (“detective work”)
- Harmonize assessments
- Identify needed preparations (stakeholders to consult, activities, documents to review)
- Identify international standards
- Self-evaluation tool for observatories

Scope

- Whole data collection process (crash investigations, reporting and registration, checking completeness and consistency, storage, analysis, use, and accessibility)
- Primary focus is crash data although other types of road safety data are considered

Reliable safety and traffic data are essential to:

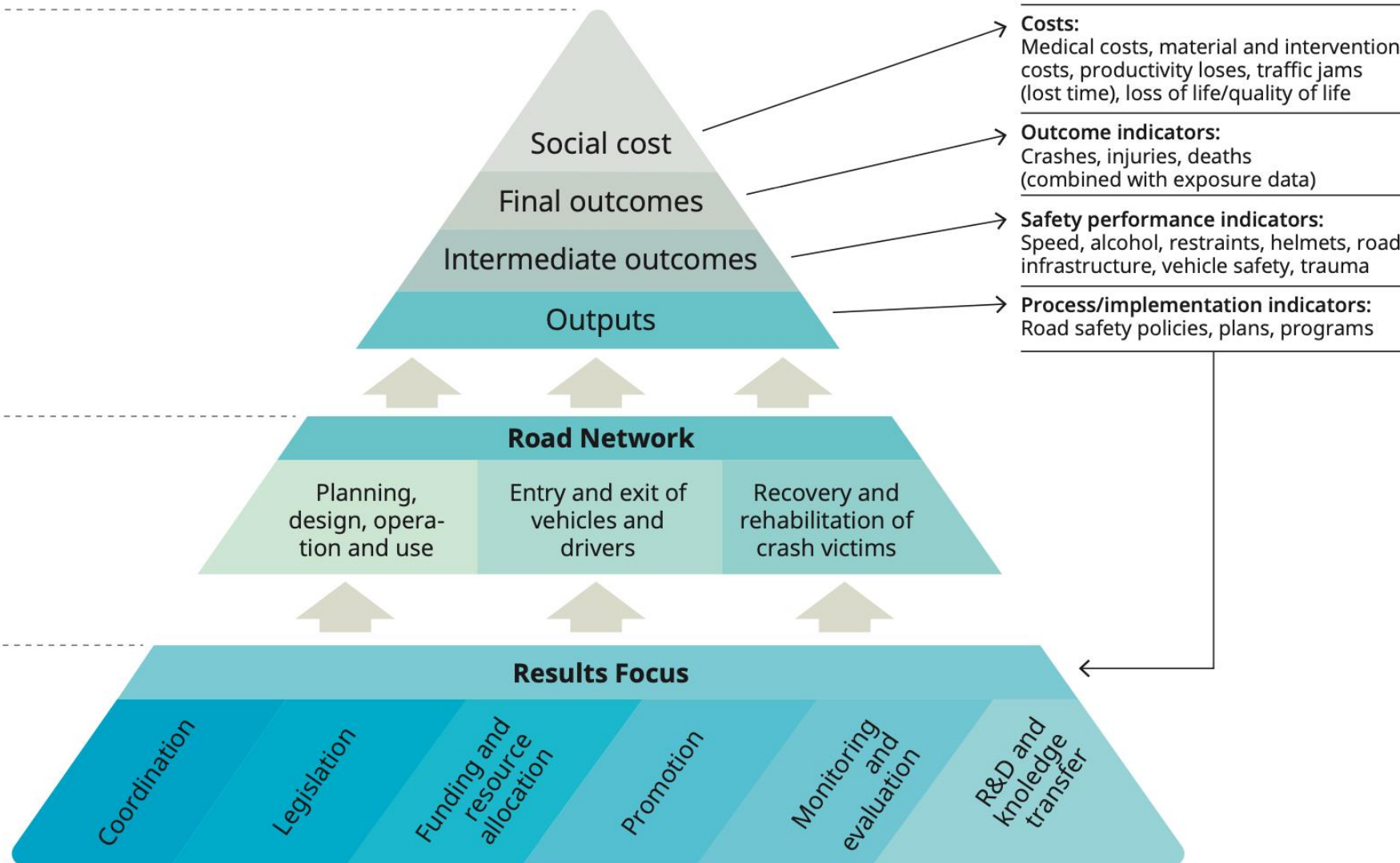


- Prioritize road safety vis a vis other public health issues
- Assess the full nature of the road safety problem (who is at risk ? When ? Why ?)
- Assess the real economic costs associated with road crashes
- If the problem is underreported, less likely to receive the right level of investment
- Design the most (cost) effective road safety interventions
- Monitor progress and adjust work plan
- Develop and implement a systematic approach to road safety

Results

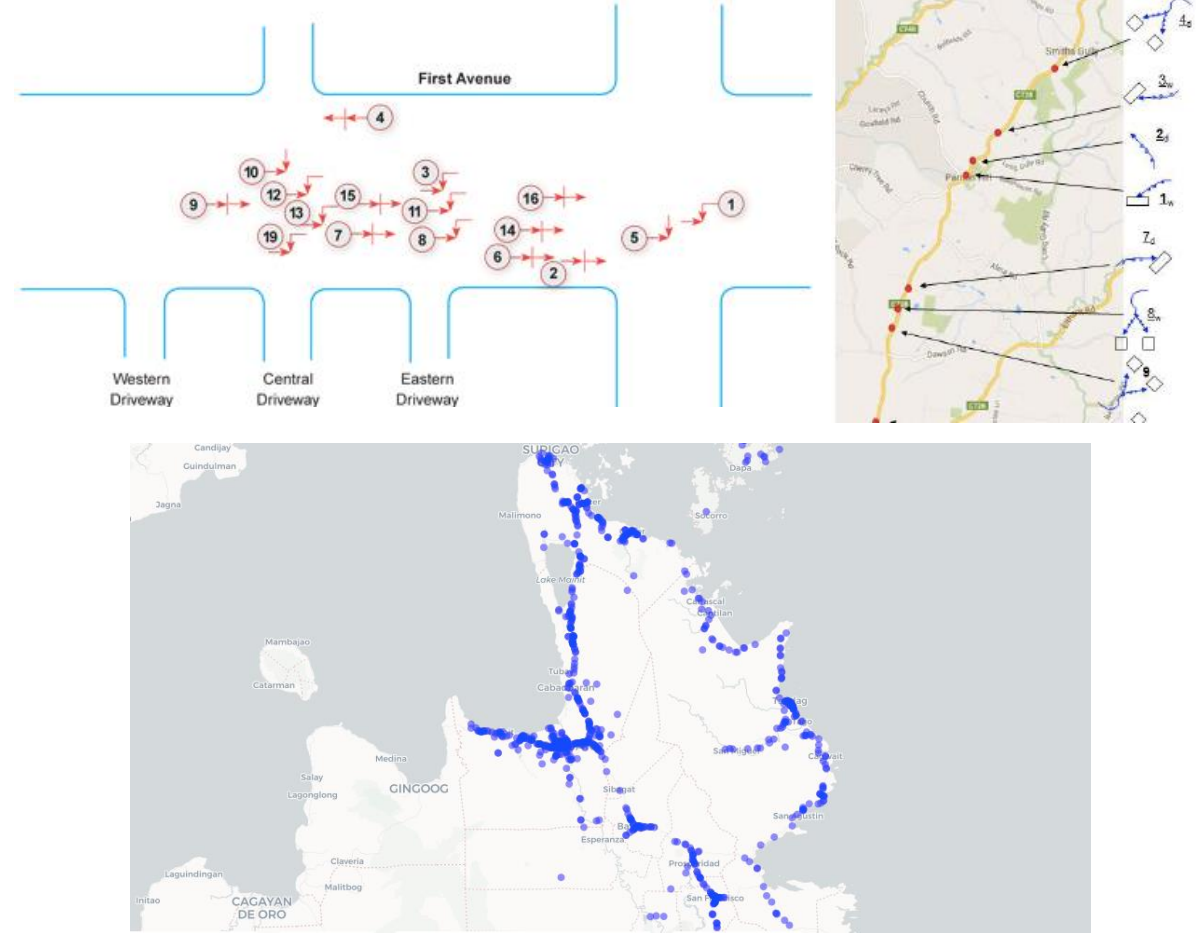
Interventions

Institutional Management Functions



Crash and Casualty Data

- Should provide full picture of road risk, fatal and serious injury most important
- Completeness and notification
- Uniformity of definitions and collection
- Crash location
- Registration, transmission, and sharing
- Data storage
- Data querying, visualization, and analysis
- Leveraging other datasets, augmenting data



> Safety Performance Indicators

TARGET 1
2020



Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.

TARGET 2
2030



Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.

TARGET 3
2030



Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.

TARGET 4
2030




Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.

TARGET 5
2030




Target 5: By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.

TARGET 6
2030




Target 6: By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.

TARGET 7
2030



Target 7: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.

TARGET 8
2030



Target 8: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.

TARGET 9
2030



Target 9: By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.

TARGET 10
2030



Target 10: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.

TARGET 11
2030










Target 11: By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.

TARGET 12
2030



Target 12: By 2030, all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care.

Target	Safety Performance Indicator	Collection Methods
 Halve the proportion of vehicles exceeding the posted speed limit	Free-flow average speeds and disaggregated by vehicle type, road type, and time-of-day	Observational studies or spot surveys
	85 th percentile speeds disaggregated by vehicle type, road type, and time-of-day	Observational studies or spot surveys
	Percentage of vehicles exceeding the speed limit	Spot surveys, enforcement data
 Halve injuries and fatalities related to drink-driving	Number and percentage of severe injuries and fatalities that are caused by at least one road user that has a BAC exceeding the legal limit	Crash data
 Increase seat belt and child restraints usage to close to 100%	Percentage of drivers and passengers wearing a seatbelt by vehicle and road type	Observational studies or spot surveys
 Increase motorcycle riders correctly using helmets to close to 100%	Percentage of motorcyclists appropriately wearing an appropriate helmet by road type	Observational studies or spot surveys
 New roads should have at least 3-star iRAP rating	iRAP star rating per road type and road user type; percentage of new roads that meet a three-star rating or better	iRAP data
 More than 75% of travel on existing roads is on roads that meet a three-star safety rating or better	iRAP star rating per road type and road user type; percentage of new roads that meet a three-star rating or better	iRAP data
 100% of new and used roads meet high quality standards such as the UN vehicle safety standards	Percentage of vehicles in the fleet with high quality safety standards	Vehicle registration and inspection data

> Other Data

- Mobility Data
- Road Safety Interventions

Safety engineering

- Road sections with improved iRAP star rating
- Number of intersections improved
- Number of speed camera operational
- Length of road with section control for speeding

Enforcement

- Number of tickets delivered
- Number of drivers checked
- Hours spent on check

Education

- Number of downloads for educational material
- Number of children taught a course

Promotional activities

- Number of clicks on promotional video
- Minutes of air time for a spot

Driver training

- Driving lessons taken by students
- Exams attempted/exams passed

Vehicle testing

- Vehicles checked
- Vehicles admitted after improvements

Emergency medical services

- Crash scenes attended
- Average time to arrive at scene

> Preparation

☐ Preparations

- ☐ List of available data
- ☐ Crash registration protocol (CADAS)
- ☐ Online GIS database

☐ Stakeholders

- ☐ RTSA road traffic safety agency
- ☐ Police
- ☐ Hospitals
- ☐ (AMSS – Motor Vehicles Center)



> Review Serbia

☐ Preparations

- ☐ List of available data
- ☐ Crash registration protocol (CADAS)
- ☐ Online GIS database

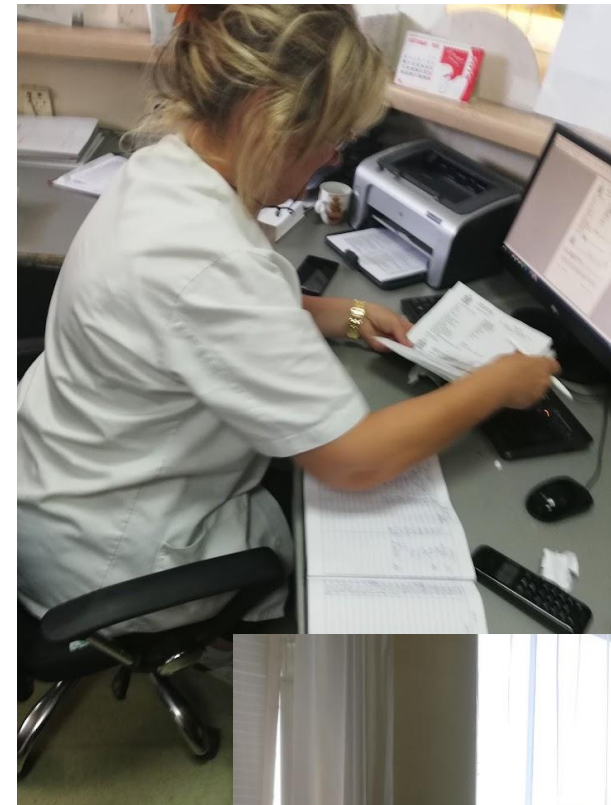
☐ Stakeholders

- ☐ RTSA road traffic safety agency
- ☐ Police
- ☐ Hospitals
- ☐ (AMSS – Motor Vehicles Center)

Police department	Pedestrian	Bicycle	Moped	Motorcycle	Passenger	Bus	Freight vehicle	Total fatalities
Total	27%	10%	2%	7%	49%	1%	3%	2776
Beograd	41%	3%	2%	5%	45%	1%	3%	507
Novi Sad	19%	14%	4%	7%	52%	0%	4%	238
Sremska Mitrovica	16%	10%	1%	8%	58%	1%	6%	182
Niš	39%	9%	4%	6%	36%	4%	2%	140
Šabac	29%	17%	3%	5%	42%	0%	5%	154
Kragujevac	30%	4%	2%	6%	56%	0%	2%	99
Pančevo	12%	15%	3%	10%	59%	1%	1%	135
Čačak	26%	6%	0%	8%	58%	0%	3%	90
Smederevo	26%	12%	2%	6%	49%	1%	5%	105
Valjevo	30%	9%	1%	5%	54%	0%	1%	81
Sombor	17%	26%	3%	8%	44%	0%	3%	66
Kruševac	31%	7%	1%	10%	44%	0%	7%	71
Kraljevo	26%	10%	2%	10%	50%	0%	2%	100
Zrenjanin	24%	21%	2%	8%	41%	1%	2%	90
Užice	26%	0%	1%	10%	61%	0%	2%	89
Jagodina	20%	10%	3%	6%	56%	0%	5%	80
Subotica	13%	19%	2%	17%	43%	6%	2%	54
Požarevac	12%	11%	4%	10%	58%	1%	5%	83
Leskovac	30%	25%	4%	7%	27%	0%	7%	56
Novi Pazar	22%	7%	0%	10%	61%	0%	0%	41
Vranje	25%	3%	8%	6%	52%	6%	0%	64
Kikinda	21%	19%	6%	10%	42%	0%	2%	62
Bor	24%	5%	3%	13%	55%	0%	0%	38
Zaječar	28%	19%	2%	4%	37%	2%	9%	54
Prokuplje	35%	8%	12%	4%	38%	0%	4%	26
Pirot	30%	9%	0%	0%	61%	0%	0%	44
Prijepolje	22%	0%	0%	7%	56%	4%	11%	27

> Review Serbia

- ☐ Police
 - ☐ Head of traffic police
 - ☐ Belgrado office
 - ☐ Head
 - ☐ Officers (data entry)
 - ☐ Pančevo office
- ☐ Hospital
 - ☐ Receptionists
 - ☐ Doctors
 - ☐ Police stationed at hospital



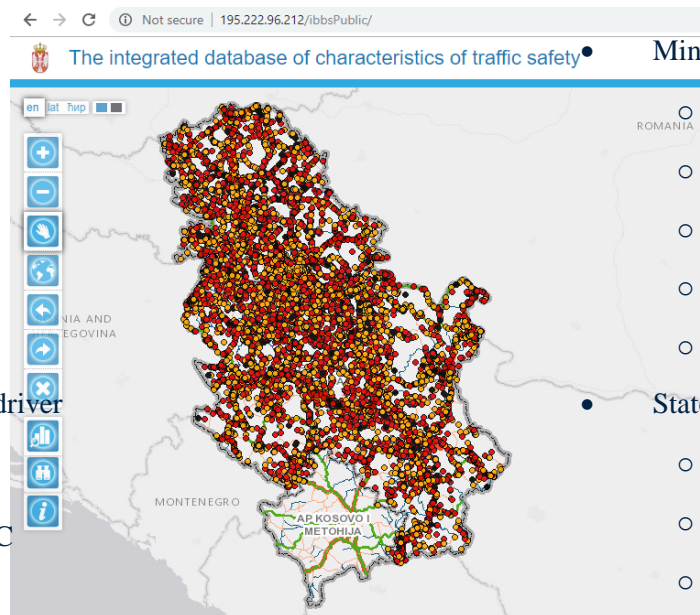
> Review Serbia: input database

- Police (via RTSA)

- Crashes & casualties

- RTSA

- SPI – road users behavior
- Social attitudes
- Road safety casualties risks
- Negligent drivers – with confiscated driver licenses
- Set of data on: lecturers, examiners, instructors, professional drivers – CPC
- Tachograph workshops
- Technicians in tachograph workshops
- The Number of licensees of technicians in tachograph workshop by municipalities
- Local road safety bodies



- Ministry of Interior

- traffic fines
- motor vehicle drivers
- registered motor vehicles
- driving training centers
- stations for technical inspections

- State Road Agency

- Set of data on AADT by sections
- Locations of traffic counters
- Traffic signs data set
- Set of data on “Black spots”
- Bridges
- Tunnels
- Landslides
- ITS devices
- International E roads



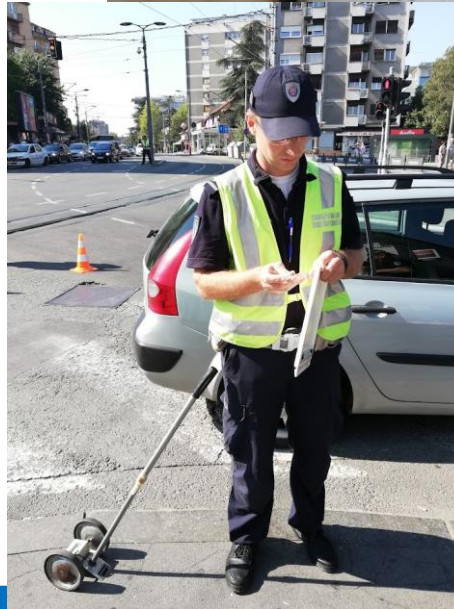
> Other Stakeholders

- ☐ State Road Agency
- ☐ Ministry of interior
- ☐ Statistics Office
- ☐ Coroners
- ☐ Insurance Companies
- ☐ Road Safety Advocacy Groups and Journalists



> Interviews

- ❑ What?
 - ❑ Organisation of data collection
 - ❑ Resources
 - ❑ Data storage and accessibility
 - ❑ Data use
- ❑ How?
 - ❑ Trace the whole chain
 - ❑ Look for tangible evidence
 - ❑ Check for consistency



> Reporting

- ☐ Evaluation
 - ☐ Completeness
 - ☐ Quality
 - ☐ Uniformity
- ☐ Recommendations
 - ☐ Organization of data collection
 - ☐ Use of road safety data
 - ☐ Additional data to collect



> Reporting -- Serbia

☐ Evaluation

- ☐ Completeness
- ☐ Quality
- ☐ Uniformity

☐ Recommendations

- ☐ Organization of data collection
- ☐ Use of road safety data
- ☐ Additional data to collect

☐ Evaluation

- ☐ Strong police
 - ☐ Head of police dedicated to road safety
 - ☐ Comfortable funding
 - ☐ Modern data system
 - ☐ Good training
- ☐ Strong compliance in crash reporting
 - ☐ No underreporting could be detected
 - ☐ Overreporting of slight injuries (in Belgrado)
- ☐ Good system for SPI data collection
- ☐ Good use of data

☐ Recommendations

- ☐ Linking to hospital data
- ☐ Collect Exposure data
- ☐ Seat belt use – documentation in crashes

THANK YOU!

<http://roadsafetyfacility.org>

<https://openknowledge.worldbank.org/handle/10986/36835>