



# Reliable road safety statistics – Monitoring SDG3

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*Astana, 2-3 November 2017*



# Overview

- SDG 3 and the Regional Context
- Glossary common definitions and data challenges
- How are data collected?
- UNECE road safety data collection and breakdown



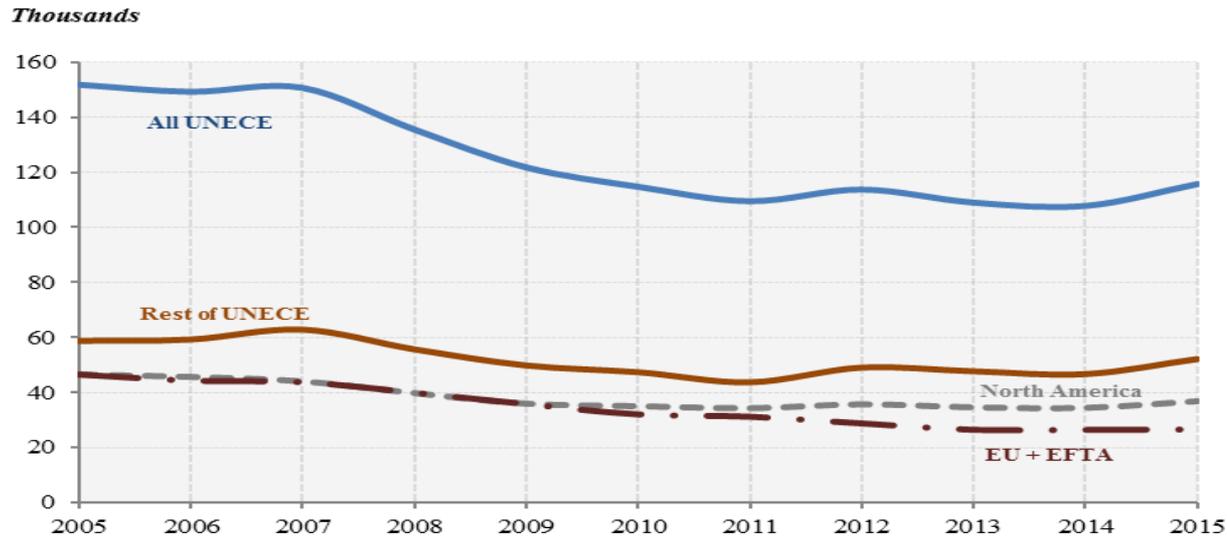
# Sustainable Development Goal 3

- TARGET: 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents
- Indicator: 3.6.1: Death rate due to road traffic injuries

Read more at <https://sustainabledevelopment.un.org/sdg3>



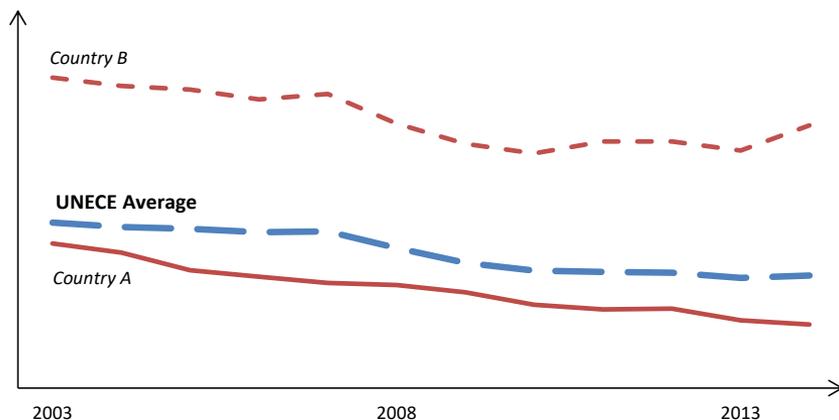
# Road deaths in ECE



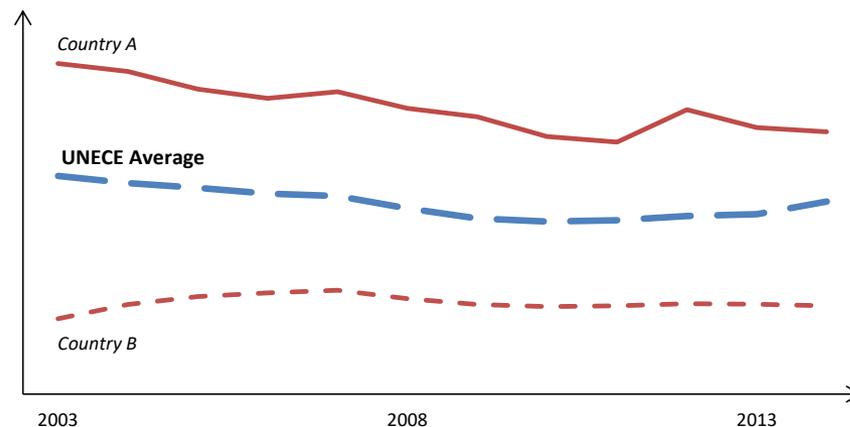
- 24% regional drop between 2005 and 2015
- ~8% reduction per year 2007-2010, but broadly flat since
- Positive trend masks huge differences between countries.

# Data Quality

Road accident fatalities per million inhabitants



Road accident injuries per million inhabitants

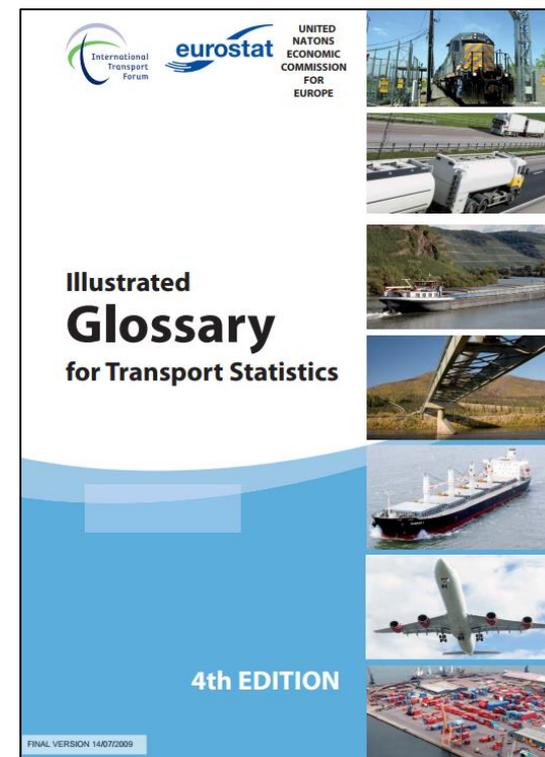


- Are road safety data from Countries A and B comparable?

- Higher accident severity in Country B? Differing definitions? Statistical capabilities?

# The Glossary

- Glossary for Transport Statistics - Joint publication with ITF and Eurostat
- Common set of definitions for all transport modes
- Currently on 4th edition and work now starting on a 5th
- Widely used by countries, reflected in many national classification systems



# Glossary Definitions

## B.VII-01 Injury accident

Any accident involving at least one road vehicle in motion on a public road or private road to which the public has right of access, resulting in at least one injured or killed person.

- *A suicide or an attempted suicide is not an accident but an incident caused by a deliberate act to injure oneself fatally. However, if a suicide or an attempted suicide causes injury to another road user, then the incident is regarded as an injury accident.*
- *Included are: collisions between road vehicles; between road vehicles and pedestrians; between road vehicles and animals or fixed obstacles and with one road vehicle alone. Included are collisions between road and rail vehicles. Multi-vehicle collisions are counted as only one accident provided that any successive collisions happen within a very short time period.*
- *Injury accidents exclude accidents incurring only material damage.*
- *Excluded are terrorist acts.*

# Glossary Definitions

## B.VII-05 Person killed

Any person killed immediately **or dying within 30 days as a result** of an injury accident, excluding suicides.

- *A killed person is excluded if the competent authority declares the cause of death to be suicide, i.e. a deliberate act to injure oneself resulting in death. For countries that do not apply the threshold of 30 days, conversion coefficients are estimated so that comparisons on the basis of the 30 day-definition can be made.*

## B.VII-06 Person injured:

Any person who as result of an injury accident was not killed immediately or not dying within 30 days, but sustained an injury, normally needing medical treatment, excluding attempted suicides.

- ***Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.***
- *An injured person is excluded if the competent authority declares the cause of the injury to be attempted suicide by that person, i.e. a deliberate act to injure oneself resulting in injury, but not in death.*

# Data Sources

- **Police** accident reports. **Not** a survey, all reported accidents noted and filed
- **Unreported** accidents (even serious ones) may be excluded. Can cause significant underreporting
- **Hospital data** can be used too, but definitions may be different.
- Statisticians should work closely with the police to improve the data and collection methods
- Be **pragmatic** on data collection



# Common Problems and Solutions

- Police don't have robust database
  - Even if police don't have a **published** database, they should have these figures available.
- Police unwilling to share data
  - No reason for confidentiality here. Overall fatality rate is a vital indicator of public health and safety, needs to be published
- Data from hospitals rather than police
  - Check time threshold for death used (30 days?) and definition of injured. Possible to adjust?
- Common definitions not followed
  - Can any adjustment be made? If not, document differences in metadata
- Under-reporting
  - Is it possible to estimate non-reported accidents through household surveys or insurance information?
- Insufficient detail
  - Report what you can. Top-level data at least?

# Accident Form Example

1.5 Number of vehicles		<input type="text"/>		1.20a PEDESTRIAN CROSSING - HUMAN CONTROL <input checked="" type="checkbox"/>		1.21 LIGHT CONDITIONS <input checked="" type="checkbox"/>	
1.6 Number of casualties		<input type="text"/>		None within 50 metres		Daylight: street lights present	
1.14 ROAD TYPE <input checked="" type="checkbox"/>		Roundabout		Control by school crossing patrol		Daylight: no street lighting	
Roundabout		1		Control by other authorised person		Daylight: street lighting unknown	
One way street		2				Darkness: street lights present and lit	
Dual carriageway		3				Darkness: street lights present but unlit	
Single carriageway		6				Darkness: no street lighting	
Slip road		7				Darkness: street lighting unknown	
Unknown		9					
1.15 Speed Limit (Permanent)		<input type="text"/>		1.20b PEDESTRIAN CROSSING - PHYSICAL FACILITIES <input checked="" type="checkbox"/>		1.24 SPECIAL CONDITIONS AT SITE <input checked="" type="checkbox"/>	
1.16 JUNCTION DETAIL <input checked="" type="checkbox"/>		Not at or within 20 metres of junction		No physical crossing facility within 50m		None	
Roundabout		00		Zebra crossing		Auto traffic signal out	
Mini roundabout		01		Pelican, puffin, toucan or similar non-junction pedestrian light crossing		Auto traffic signal partially defective	
T or staggered junction		02		Pedestrian phase at traffic signal junction		Permanent road signing or marking defective or obscured	
Slip road		03		Footbridge or subway		Roadworks	
Crossroads		05		Central refuge — no other controls		Road surface defective	
Multiple junction		06				Oil or diesel	
Using private drive or entrance		07				Mud	
Other junction		08					
Other junction		09					
JUNCTION ACCIDENTS ONLY							
1.17 JUNCTION CONTROL <input checked="" type="checkbox"/>		Authorised person		1.22 WEATHER <input checked="" type="checkbox"/>		1.25 CARRIAGEWAY HAZARDS <input checked="" type="checkbox"/>	
Automatic traffic signal		1		Fine without high winds		None	
Stop sign		2		Raining without high winds		Dislodged vehicle load in carriageway	
Give way or uncontrolled		3		Snowing without high winds		Other object in carriageway	
		4		Fine with high winds		Involvement with previous accident	
				Raining with high winds		Pedestrian in carriageway - not injured	
				Snowing with high winds		Any animal in carriageway (except ridden horse)	
				Fog or mist — if hazard			
				Other			
				Unknown			
				1.23 ROAD SURFACE CONDITION <input checked="" type="checkbox"/>		1.26 Did a police officer attend the scene and obtain the details for this report? <input checked="" type="checkbox"/>	
				Dry		Yes	
				Wet / Damp		No	
				Snow			
				Frost / Ice			
				Flood (surface water over 3cm deep)			

Subject to local directions, boxes with a grey background need not be completed if already recorded

[http://docs.adrn.ac.uk/888043/mrdoc/pdf/888043\\_stats19-road-accident-injury-statistics-report-form.pdf](http://docs.adrn.ac.uk/888043/mrdoc/pdf/888043_stats19-road-accident-injury-statistics-report-form.pdf)

# Collection Challenges

- Turkey's fatalities more than doubled (3524 to 7530) from 2014 to 2015, due to new inclusion of deaths within 30 days (rather than just at scene)
- Hospital data often much higher than police data for bicycle accidents, as not reported to police



# Data Breakdown

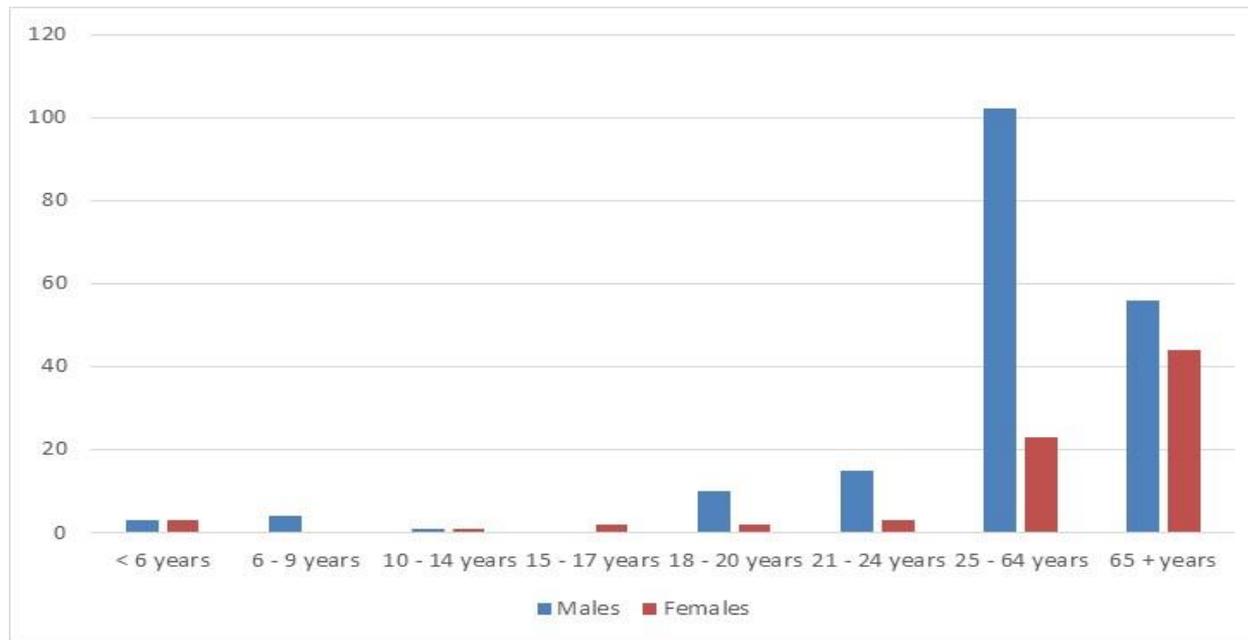
- **Location**
  - Motorways
  - inside built-up areas
  - Outside built-up areas
- **Time**
  - Month
  - Day of week: Monday-Thursday, Friday, Saturday, Sunday
- **Light condition**
  - Daylight
  - Twilight (or unknown)
  - Darkness
- **Road condition**
  - Dry road surface
  - Other (wet, icy etc.)
- **Accidents between:**
  - Vehicles and pedestrians
  - Between vehicles
  - Single vehicle accidents
- **Accidents between vehicles:**
  - Rear-end collisions
  - Collisions due to crossing or turning
  - Head-on collisions
  - Collision at level crossing
- **By age of victim:**
  - 0-6, 7-9, 10-14, 15-17, 18-20, 21-24, 25-64, 65 and over
- **By gender of victim**

# Gender Breakdown

- **Three quarters of road deaths are men.** Understanding gender differences in data means policies can be better targeted. E.g. target awareness programmes on males.
- New gender table in our 2017 Publication



# Gender and Age

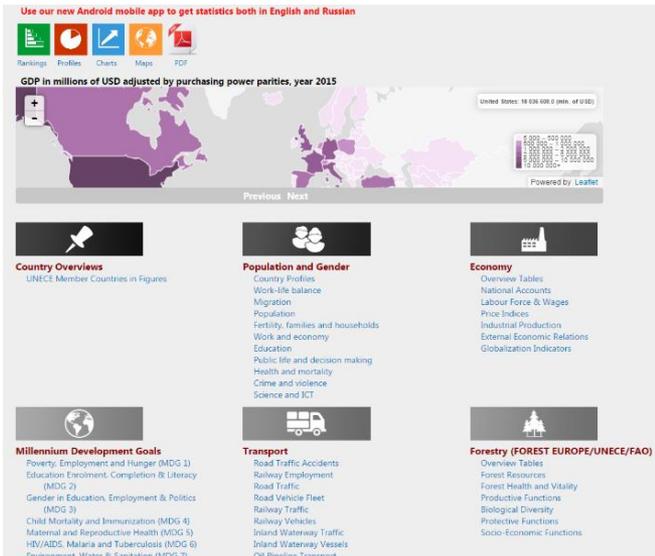


- Data breakdown in Switzerland shows adult males 25-64 years old ~40% of all deaths. Allows evidence-based policy making

# UNECE Data for SDG 3

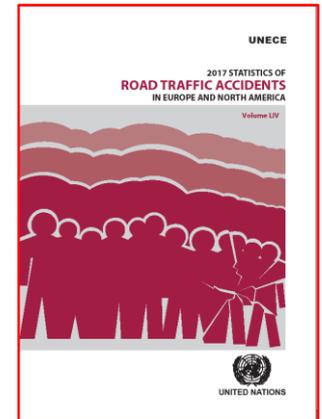
- **Ongoing updates**

- UNECE Statistical Database - [w3.unece.org/PXWeb/en](http://w3.unece.org/PXWeb/en) - latest update June 2017

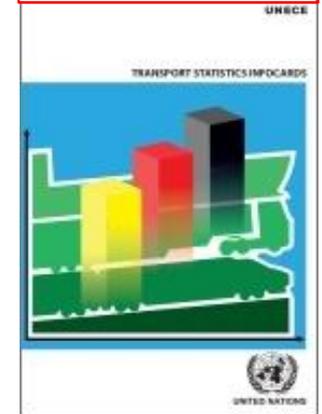


- **Periodic Updates**

- **Statistics of Road Traffic Accidents in Europe and North America**

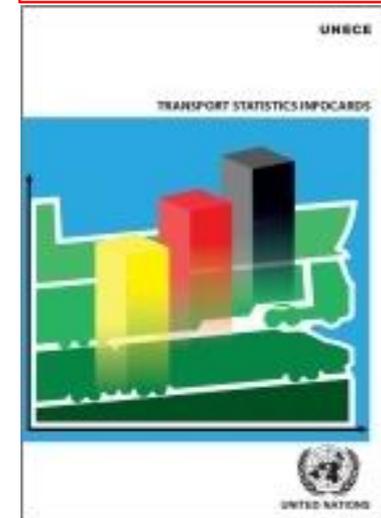
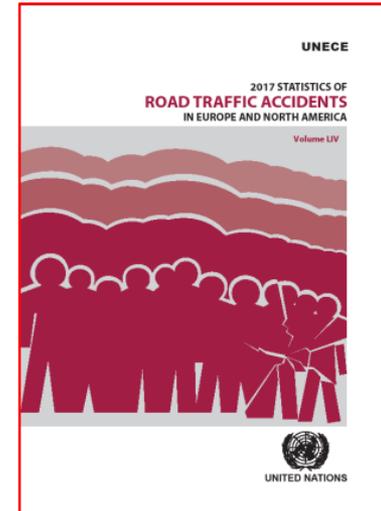


- **Transport Statistics Infocards**



# UNECE Data Situation

- Published data go back to 1993, for 55 UNECE countries
- Good data availability at the top level for most countries, but better completeness and timeliness needed
- Data on total number of accidents, number of fatalities and number of injuries, plus breakdown
- UNECE works with the ITF and the E.U. (Care database) to harmonise data collection + reduce reporting burden



# Regional Data

- Azerbaijan and Uzbekistan already reported data for 2016
- Some countries haven't sent data since 2012 or earlier
- Better breakdown and consistency of injury numbers would allow better analysis



**Suggestions? Comments?**

**We are here to help!**

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