Global benchmarking of road safety in cities

IRTADCities

Katerina Folla
Civil - Transportation Engineer
Researcher, PhD Candidate
Website: www.nrso.ntua.gr/katfolla
e-mail: katfolla@central.ntua.gr

Together with:
Eleonora Papadimitriou, George Yannis

Monday 15 May at 14:00
The future of road safety research

NTUA Zografou Campus, Athens
Railways Amphitheatre of the Department of Transportation Planning and Engineering
The Safer City Streets Initiative

• Since 2012, the International Transport Forum (ITF) of the OECD started elaborating an initiative on the monitoring and benchmarking of road safety performance across world cities.

• NTUA has contributed actively in the preparation phase of this initiative also by developing the respective methodological framework.

• In 2016, ITF launched the Safer City Streets initiative aiming to develop a network and database for road safety monitoring and benchmarking in cities worldwide (www.itf-oecd.org/safer-city-streets).

Katerina Folla, Global benchmarking of road safety in cities – IRTADCities
Background

• By 2050, around **two thirds** of the population will live in urban areas.

• **Every minute** a person dies in city traffic.

• Among people killed on city streets, **8 out of 10** are pedestrians, cyclists and other vulnerable road users.

Road traffic fatalities, annual reduction, pilot cities, 2005-2011

- Vulnerable road users: -4%
- Other road users: -9%


Source: [https://www.itf-oecd.org/safer-city-streets](https://www.itf-oecd.org/safer-city-streets)
City road safety data challenges

• **Few international projects** or initiatives dedicated to road safety in cities.

• **Fatality data alone may not be sufficient**, especially for cities of small or medium size.

• Most countries / cities have not yet implemented the dedicated studies required to estimate the number of **serious injuries** on the basis of the MAIS3+ definition.

• Little usable data available in **international road safety databases** (e.g. number of fatalities at administrative unit level).

• **Lack of traffic / exposure data** and safety performance indicators.

• **Data availability and comparability** issues are expected to be considerable.
City grouping criteria

City Definition
• The City is defined as the area with clear administrative boundaries containing the historical city center and the inhabited area. A minimum population density ranging between 100 - 150 inhabitants per km$^2$ is proposed for defining the inhabited area.

• The Greater City is defined as the area outside the “City”, containing an inhabited area with minimum population density ranging between 50 -100 inhabitants per km$^2$.

City Grouping Criteria
• Geographical (UN World regions)
• City size (OECD, 2012)
  - small-sized urban areas (< 200 000 people)
  - medium-sized urban areas (200 000-500 000 people)
  - metropolitan areas (500 000 - 1.5 million people)
  - large metropolitan areas (> 1.5 million people)
  - mega-cities (> 10 million people)
Data and information needs

- **Fatality data and serious injury data** (preferably on the basis of the MAIS3+ definition).

- For small and medium size cities, the **average of 3 to 5 last years** may provide the necessary statistical significance.

- **Local safety performance indicators** are preferred.

- Additional **background information** needed:
  - demographic and socio-economic aspects,
  - road safety management indicators,
  - road safety measures,
  - mobility plans etc.
1. **Road safety outcomes**: e.g. fatalities and serious injuries per road type and road user type.

2. **Safety performance indicators**: e.g. road user protection indicators (seat belt and helmet use), road infrastructure indicators.

3. **Transport demand and exposure**: e.g. modal split/share of trips (also for non-motorised travel), person-kilometres, vehicle fleet.

4. **Demographic and socio-economic indicators**: e.g. GDP per capita, unemployment rate, population/commuter-adjusted daytime population, road length.
Next steps

• Methodological issues deserving **common reflection** may be addressed gradually as the data become available.
  - Understanding city definitions
  - Understanding data definitions

• **Regular updates** of the database with focus on data comparability and potential harmonization.

• During the **analysis phase**, data issues re-discussed and methodology re-defined.
Future challenges

- The Safer City Streets initiative presents very important **scientific challenges**.

- It will be attempted for the first time **to de-code the complex urban environment** and identify the mix of the road accidents contributing factors.

- **Comparability** of road safety performance of cities with different sizes and characteristics is a great challenge, as is the **transferability** of good road safety practices.
Global benchmarking of road safety in cities

IRTADCities

Katerina Folla
Civil - Transportation Engineer
Researcher, PhD Candidate
Website: www.nrso.ntua.gr/katfolla
e-mail: katfolla@central.ntua.gr

Together with:
Eleonora Papadimitriou, George Yannis