Thematic Fact Sheets on Road Safety Risk Factors in Africa: A Knowledge and Management Tool

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Road Safety in Africa

- Africa presents the highest traffic fatality rates globally, with almost 3x higher fatality risk than Europe

Source: WHO 2018
Road Safety in Africa

- More than half of all fatalities in the world concern **VRUs** (motorcyclists, cyclists, pedestrians)

- The African Region has the **highest proportion of pedestrian and cyclist fatalities** (44%) of all road traffic deaths

- This is partly attributed to the fact that **walking and cycling** are important means of transport in Africa

Source: WHO 2018
Why SaferAfrica?

- **300,000** traffic fatalities and over **5mil.** injured per year
- Opportunity to **exchange** information and experience between Europe & Africa
- **Assist** with evidence and data gathering
- **Strengthen** capacity and **identify** training needs
- **Transfer** and **share** good practices
The SaferAfrica Project

- **Funded** under the Horizon 2020 Mobility for Growth (MG-3.6-2016 – Euro-African initiative on road safety and traffic management)

- **Title:** SaferAfrica - Innovating Dialogue and Problems Appraisal for a Safer Africa

- **Duration:** 36 months (Oct 2016 – Sep 2019)

- **Project Leader:** University of Roma – La Sapienza
## Project Partners

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<th>Participant Organisation Name</th>
<th>Country</th>
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<tr>
<td>Research Centre for Transport and Logistics (CTL) - Coordinator</td>
<td>Italy</td>
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<tr>
<td>National Technical University of Athens (NTUA)</td>
<td>Greece</td>
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<td>Belgian Institute for Road Safety (IBSR)</td>
<td>Belgium</td>
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<td>International Road Federation (IRF)</td>
<td>Switzerland</td>
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<td>IFSTTAR</td>
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<td>Loughborough University (LOUGH)</td>
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<td>National Laboratory of Civil Engineering (LNEC)</td>
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<td>Institute of Road Safety Research (SWOV)</td>
<td>Netherlands</td>
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<td>SITRASS</td>
<td>France</td>
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<td>Agency for the Promotion of European Research (APRE)</td>
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<td>Vehicle and Traffic Safety Centre (SAFER)</td>
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<td>National Advanced School of Public Works (ENSTP)</td>
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<td>Handicap International (HI)</td>
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<td>Abidjan – Lagos Corridor Organisation (OCAL)</td>
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<td>ICI-Santé (ICI)</td>
<td>Burkina Faso</td>
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<td>International Motor Vehicle Inspection Committee (CITA)</td>
<td>Belgium</td>
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SaferAfrica Objectives

- Create **favorable conditions** and opportunities for the **effective implementation of actions and knowledge** for road safety and traffic management in African countries by setting up

- **Dialogue Platform**
  between Africa and Europe

- **African Road Safety Observatory**
  (www.africanroadsafetyobservatory.org)
Limitations for Comparisons of Road Accident Data

- Incompatibility of data
  - Different collection procedures
  - Different definitions of the variables and values utilized

- Sources of data incompatibility:
  - Missing or incomplete national definitions (e.g. for weather conditions)
  - Different definitions in different countries (e.g. for road types)
Limitations for Comparisons of Road Accident Data

- Underreporting
  - Issue of *general concern* in Africa

- Additional inaccuracies
  - *Conditions* under which the primary *information* is *collected* by the police officer
  - Quality of *information* filled-in later on
  - *Inadequate training* of the *Police* collecting the information
Methodology

- **Analyse** collected road safety **data**
- **Identify** key **risk factors** affecting road safety in African countries
Data Analysis and Identification of Risk Factors

- Development of data organisation and analysis system
  - Produce indicators
  - Define critical areas per topic and region

- Data collection
  - International databases (WHO, IRF World Road Statistics, etc.)
  - Questionnaires distributed to national experts
Thematic Topics for developing Knowledge and Management Tools

- Gender
- Road user behavior
- Infrastructure
- Vehicle
- Post-crash care
- Road Safety Management
**Gender**

- **Males** are more likely to be involved in road crashes
  - Higher exposure
  - Riskier driving behaviour

- **73% of all road traffic deaths occur among young males under the age of 25**

- Africa bears the biggest burden of them all
Road User Behavior

- Key Risk Factors
  - Speed
  - Alcohol
  - Helmet use
  - Seatbelt use
  - Child restraint use

- Exploited through
  - SPIs
  - Legislative and traffic law enforcement information
Road User Behavior

- SPIs relating to **speeding**
  - 3 countries available data
  - **50%** of drivers drive **above** the legal **speed limits**

- Not possible to draw conclusions
- **Speed** is a **contributory factor** to the **number of deaths**
Road User Behavior

- Legislation vs road user behavior
  - Enforcement
    - low in most African countries
  - Enforcement (high to low)
    - seatbelts use
    - helmet wearing
    - speeding
    - drink-driving
Infrastructure

- **Macroscopic** infrastructure risk factors
  - SaferAfrica analyses results (+ geographic regions)
  - Technical reports’ results overview
  - International scientific papers’ results overview

- **Microscopic** infrastructure risk factors
  - Technical report results
  - International published papers results
**Infrastructure**

- **Macroscopic infrastructure risk factors**
  - Road network
    - weak but existent relationship with fatality rates
  - Road type
    - inconsistency, between highways and rural roads
    - strong declining trend when examining the relationship between fatality rates and % of paved roads (WHO)
    - declining (weaker) trend when examining the relationship between fatality rates and network density (WHO)

- **Microscopic infrastructure risk factors**
  - Various potential factors
    - interchange spacing and type, road width, curve radius, absence of street light, etc.
Vehicle

- Vehicle’s Killing Potential (VKP)
  - \# of deaths in accident crashes /1,000 vehicles /year
Vehicle

- GNI per Capita (US$) vs VKP

\[ y = 4474.6x^{0.608} \]

\[ R^2 = 0.5789 \]
Post–Crash Care

- Key performance indicators explored through
  - Emergency care management
  - Traffic incident management
  - Accident cost management
  - Rehabilitation care management
Post–Crash Care

- Structure on medical health under development
  - Post-crash care still poor
    - limited resources (human – infrastructure)
    - most professionals not being specialized
    - ambulance services available only in cities
    - road infrastructure barrier in rural areas
  - For many governments, first-aid courses
    - mandatory in schools
    - condition to get a drivers’ license
Road Safety Management

- Critical issues
  - Existence of a **lead agency**
  - Mobilization of **resources**
  - Access to **good data**
  - **Information** recording
Road Safety Management

- In general **good performance**
  - Establishment of a **lead agency**
  - Existence of certain **management and evaluation tools**

- **Weakness**
  - Partial or lack of **dedicated funding** for the implementation of road safety strategies
  - Poor system
    - data registration
    - monitoring road safety performance
Synthesis

- Road safety in Africa is **poor**
- **Lack of knowledge** on road casualties
  - Number
  - Associated factors leading to road accidents
  - Serious deficiency of road safety data

- Available road safety data were analysed for identifying
  - **Key risk factors**
  - **Priority areas** for road safety actions and interventions per region/ country
Conclusions

- Results were published in the form of **Thematic Fact Sheets**
  - **Tool** for the **comparative assessment** of the road safety level
  - Their **systematic update** in the future is expected to contribute to the monitoring of the evolution of road safety performance
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