Road Safety in Africa

- Road traffic fatality rates per 100,000 population (WHO 2015)

- Africa presents the highest traffic fatality rates globally, with almost three times higher fatality risk than Europe
The SaferAfrica Project

- Funded under the Horizon 2020 Mobility for Growth
- 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

SaferAfrica Objectives:
Create favorable conditions and opportunities for the effective implementation of actions for road safety and traffic management in African countries, by setting up:
- a Dialogue Platform between Africa and Europe
- the African Road Safety Observatory

<table>
<thead>
<tr>
<th>Partner</th>
<th>Country</th>
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<tbody>
<tr>
<td>1 CTL</td>
<td>Italy</td>
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<td>2 NTUA</td>
<td>Greece</td>
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<td>3 IBSR</td>
<td>Belgium</td>
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<td>4 IRF</td>
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<td>14 OCAL</td>
<td>Benin</td>
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<td>15 ICI</td>
<td>Burkina Faso</td>
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<td>16 CITA</td>
<td>Belgium</td>
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</tbody>
</table>
SaferAfrica Overall Concept

- Institutional level
- Technical level
- Both levels closely interconnected
  - Foster the appropriate match between African road safety policy evolution
  - Enhance knowledge
  - Deliver institutional capacity
African-RSO Objectives

- Assess the implementation of the African Action Plan
- Activate Twinning Programs between Africa and Europe
- Conduct capacity reviews
- Enable sharing of good practices
- Support capacity-building activities
- Assess thoroughly the needs of African stakeholders in terms of knowledge, data and information tools
African-RSO Structure

- About the African-RSO
- Statistics
- Road Safety Management
- Good Practices
- Capacity Building
- Dialogue Platform
- News

www.africanroadssafetysobservatory.org
African-RSO Statistics

- Statistics
- Data Collection
- Indicators
- Infographics
- Analysis
- Underreporting

- Accidents, Exposure, Performance Indicators
- Thorough Quality Control
Methodology

Analysis of existing systems and of the findings of the survey in Africa

- US-NHTSA FARS – NASS Systems
- Survey in the context of Safer Africa project
  - road safety data
  - data collection systems
  - definitions
Type of Data Assessed

• 3 types of data
  – Accident data
  – Exposure data
  – Road safety performance indicators

• Limitations in the collection process
  – experience
  – unavailability
  – lack of standardization

• 2-fold priorities scenario per data type proposed
  – usefulness
  – easiness to collect
Accident Data

- **Common dataset** composed of minimum data elements (variables) acts as key tool for ensuring the appropriateness of data captured

- **Uniformity** of accident data crucial for subnational - international comparisons

- **2-step approach** for developing common data collection system
  - improvement and harmonisation of existing data and methods
  - collection of new harmonised data
Common Accident Data Collection System

The minimum set of standardised data elements enables:

• comparability of available road accident data in Africa
  – serving national needs (organizations, authorities, etc.)

• compatibility with international data

• transferability of knowledge and best practices from developed countries
  – taking into account particular local needs and conditions
Road fatalities

- **International definition:** “the persons who died within 30 days from the day of the accident”
- At present, this definition is **used by a number of African countries** and is suggested to be adopted by the remaining ones
- Some countries have to **modify the data collection process** and develop appropriate conversion factors, prior to the adoption of the common definition
Accident Data - Definitions and Standards (2/2)

Injury severity

• The **minimum injury** for which an accident is recorded by the Police varies among countries

• Important differences among countries between **seriously and slightly injured** persons.
Limitations for International Comparisons of Road Accident Data (1/3)

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)
Underreporting

- Issue of general concern in Africa
- Affects the degree to which the statistical output of a country’s data system reveals the actual situation of road safety
- Road accident databases linking Police and hospital data may serve as a potential solution
Additional inaccuracies

- Conditions under which the primary information is collected by the police officer
- The way this information is filled-in later on
- Inadequate training of the Police collecting the information
Accident Data Collection Process

• Police reports
  – **key role** in the accident data collection process
  – responsible for **providing the authorities** with the collected data
  – main tool: **accident data collection form** with clear instructions on
    – filling process
    – data transmission process to the national data file

• Hospital data
  – necessity for **clear guidelines on the collection and coding of variables** to be included in Hospital data
  – identifiers should **match hospital and police data**

• In-depth accident investigations
  – **high level of detail** about each accident and how this can be related to a number of outcomes
  – aimed at **the cause of the accident**, not who was to blame
Accident Data Collection Priorities

• **Common road accident database** in a uniform format
  - continuously updated (compatible - comparable data)
  - allowing for more reliable analyses and assessments across the African countries

• **Selection criteria** for defining minimum data elements
  - data elements - values useful for road accident analysis at both national and international level
  - level of detail of the variables - values corresponds to all data useful for macroscopic data analysis
  - data elements - values comprehensive and concise
  - data difficult to collect should not be included
  - all variables and values refer to casualty road accident

• Data structure to follow the structure proposed in the WHO (2011) manual
# Proposed Data Structure of the Common Road Accident Data Set

<table>
<thead>
<tr>
<th>Accident related variables</th>
<th>Road related variables</th>
<th>Vehicle related variables</th>
<th>Person related variables</th>
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<tbody>
<tr>
<td>1st priority</td>
<td>2nd priority</td>
<td>1st priority</td>
<td>2nd priority</td>
</tr>
<tr>
<td>Accident ID</td>
<td>Impact type</td>
<td>Type of roadway</td>
<td>Speed limit</td>
</tr>
<tr>
<td>Accident date</td>
<td>Road functional class</td>
<td>Road obstacles</td>
<td>Vehicle type</td>
</tr>
<tr>
<td>Accident time</td>
<td>Junction</td>
<td>Road surface conditions</td>
<td>Vehicle make</td>
</tr>
<tr>
<td>Accident region - municipality</td>
<td>Traffic control at junction</td>
<td>Vehicle model</td>
<td>Seating position</td>
</tr>
<tr>
<td>Accident location</td>
<td>Road curve</td>
<td>Vehicle model year</td>
<td>Injury severity</td>
</tr>
<tr>
<td>Accident type</td>
<td>Road segment grade</td>
<td>Vehicle manoeuvre</td>
<td>Driving licence issue date</td>
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<tr>
<td>Weather conditions</td>
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<td>Light conditions</td>
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<td>Age</td>
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<tr>
<td>Accident severity</td>
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</tbody>
</table>
Implementation Roadmap (1/3)

Sampling and costing

- Data elements should be comprehensive, concise and refer to casualty road accidents
- Demanding data (time, cost, collection barriers etc.) to be avoided regardless of their value for road accident analysis
- 2-stage priorities scenarios proposed
  - 1st priority data, no significant cost, data expected to be available in national databases
  - 2nd priority data, cost of surveys depends on country size
- Exposure and SPIs surveys required for the 2nd priority
  - alcohol survey
  - speed survey
  - use of protection systems survey
Implementation Roadmap (2/3)

• Adopt standard data definitions and standard data collection processes
  – data elements - values must be useful for road accident analysis
    • national level
    • international level
  – collection process performed and standardised
    • upon road accident (accident data)
    • on a periodic basis (exposure data – SPI surveys)
Implementation Roadmap (3/3)

General
- Establishment of **capacity at the authorities**
- Summary **sampling and costing**
- Adopt **standard data definitions** and collection processes
- Dedicated **budget**
- Formation of **Pan-African coordinate organization**

SaferAfrica
- Recommendations to be rapidly conveyed to the involved local African authorities through a **network of national experts**
- **SaferAfrica coordinator** in charge
- **Steps**
  - identify data set needed as well as costs
  - secure funding
  - carry out regular data collection
  - process (data base) and analyse
The SaferAfrica Project

George Yannis, Stergios Mavromatis, Alexandra Laiou, Katerina Folla
National Technical University of Athens, Greece

Antonino Tripodi, Luca Persia, Davide Usami, Eleonora Meta
Università degli Studi di Roma "La Sapienza", Italy

Athens Regional Workshop
On setting up road safety reliable, harmonized and comparable data collection system and sharing at regional level
8-10 May 2018

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