



Assessing Road Safety Management in Africa

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Abstract

The number of road fatalities in Africa represents 31% of the relevant global figure. Europe could play an important role in supporting African countries to improve their road safety and traffic management performance. These considerations are addressed through the *SaferAfrica* project; which aims in creating favorable conditions and opportunities for the effective implementation of road safety and traffic management actions in the African countries.

As an initial approach towards this goal, it was essential to understand per country the current status in terms of basic road safety aspects and definitions. Therefore, through a survey among a number of African countries, critical socio-economic, organizational-operational dimensions as well as basic data collection, processing and reporting definitions were assessed.

The present paper, by presenting the results of this survey, aims to describe the basic fields that should be raised in order to assess in general terms the characteristics of a country's road safety management.

Keywords: *Road safety, SaferAfrica, Data Collection, Road Safety Management, Questionnaire*

1. Introduction

Worldwide, road safety remains an issue of general concern with major societal and economic impacts. In many countries road accidents have become one of the major causes of death and road safety is regarded as an issue of public health. According to the *Global Status Report on Road Safety 2015* of the World Health Organization (WHO, 2015), "road traffic injuries claim more than 1.2 million lives each year and have a huge impact on health and development".

Although globally the number of road fatalities and serious injuries has a rather decreasing trend, significant variations are reported between continents. Among them, Africa is the worst performing. The mortality rate in Africa (26.6 fatalities/10⁵ population) is almost as three times as Europe's, where the number of road fatalities represents 31% of the relevant global figure (WHO, 2015).

However, the most disturbing concern is the fact that the disparity in road safety results seems to be increasing (WHO, 2013; WHO, 2015). More specifically, in the WHO Europe region fatality rates improved from 10.3 per 100,000 population in 2010 to 9.3 per 100,000 population in 2013. Over the same period, road fatality rates in the WHO Africa region, increased from 24.1 per 100,000 population to 26.6 per 100,000 population. As far as Africa



is concerned, road trauma is expected to worsen further, with fatalities per capita projected to double from 2015 to 2030 (Small et al., 2014).

Europe could play an important role in supporting African countries to improve their road safety and traffic management performance. These considerations are addressed through the *SaferAfrica* project; a joint effort of 17 partners from both continents, aiming to create favorable conditions and opportunities for the effective implementation of road safety and traffic management actions in the African countries, by setting up a Dialogue Platform between Africa and Europe.

Conversely in order to structure and operate such an interactive tool aiming at enhancing road safety performance in Africa, many barriers need to be overcome. Among them stands the substantial lack of detailed knowledge on road casualties in terms of their number as well as associated factors leading to road accidents or affecting their consequences.

As an initial approach towards this goal, it was essential to understand per country the current status in terms of basic road safety aspects and definitions. Therefore, through a survey among a number of African countries, critical socio-economic, organizational-operational dimensions as well as basic data collection, processing and reporting definitions were assessed.

The present paper, by presenting the results of this survey, aims to describe the basic fields that should be raised in order to assess in general terms the characteristics of a country's road safety management.

2. Methodology

A key assignment within the *SaferAfrica* project was to thoroughly assess the needs of stakeholders involved in road safety in terms of knowledge and information tools and convey a clear view on current road safety practices followed in Africa.

For this task a two-fold approach was followed; a short questionnaire concerning basic road safety data processing, availability and definitions followed by an extensive survey where besides other concerns, detailed demands and views of road safety stakeholders not necessarily directly involved in decision-making in each examined African country was carried out.

The structure of the detailed survey, the feedback of which at present time is under an analysis process, was partially based on relevant questionnaires developed in the framework of the EU funded project "DaCoTA" (Papadimitriou et al, 2012). Besides other concerns, detailed demands and views of road safety stakeholders not necessarily directly involved in decision-making are addressed for each African country.

Specifically, previously developed questions on respondent's background information, road safety management and data collection practices were adjusted to the needs and particularities of *SaferAfrica* and included in the extensive questionnaire. Furthermore, this extensive questionnaire was enriched with new questions on road safety resources and basic road safety data, developed appropriately to reflect the conditions in Africa. It consists of two sections;



namely, Road Safety Activities and Data & Data Practices, subdivided further into three and two parts respectively as follows:

- Section 1 – Road Safety Activities
 - ✓ Activity in the field of road safety
 - ✓ Road safety management practices per country
 - ✓ Key road safety resources utilized in respondent's daily work
- Section 2 – Data and Data Practices
 - ✓ Data collection practice
 - ✓ Basic road safety data per country

The first part of Section 1 aimed at collecting “background information” allowing describing in a more thorough way the stakeholders' involvement in the field of road safety. The input required information, such as: their country of work, the type of organisation they worked for, the types of activities they were primarily involved in concerning road safety, as well as their experience in the field of road safety.

The second part of Section 1 deals with road safety management systems and acts as a tool for the assessment of road safety legislation, policy and institutional capacity in African countries. This part consists of the following five fields:

- Institutional organisation, coordination and stakeholders' involvement
- Policy formulation and adoption
- Policy implementation and funding
- Monitoring and evaluation
- Scientific support and information, capacity building

The third part of Section 1 deals with key road safety resources utilized in the respondent's daily work and consists of:

- Databases – information sources
- Documents (road safety analyses, management and good practice manuals)
- Contacts of key road safety stakeholders in their country
- Conferences and events recently organised in their country
- Web resources in their country

In the first part of Section 2 an assessment of the demands and views of road safety stakeholders is carried out in terms of the scientific input (information, data, tools etc.) that actors, involved at various levels and in various areas of road safety, consider important and necessary for their work. Specifically, questions concerned items on:

- Data and resources for fact finding and diagnosis of road safety issues
- Data and resources for the development of road safety related programmes
- Data and resources for the implementation of road safety related measures
- Data and resources for the monitoring and evaluation of road safety measures

The respondents were asked to evaluate each listed item on two different dimensions: (1) the perceived priority for their personal work, and (2) the perceived availability at the level of their country (i.e. the extent to which, according to their knowledge, the item in question was available would they want to use it) (Papadimitriou et al, 2012).



The priority ratings were made on a scale comprising four response options: “High priority” (3); “Medium priority” (2); “Low priority” (1), and “Not relevant to my work” (0). The availability of each item was evaluated on the basis of the following response options: “Already available” (3); “Partially available” (2); “Currently not available” (1); “Unknown” (0).

Finally, in the second and final part of Section 2, the following basic road safety data per country were recorded

- Definitions of
 - Road fatality
 - Road injury
 - Hospitalised due to road accident
- Road fatalities in time-series (1995-2015 or any available years)

Road fatalities in 2015 or latest available year

- Risk Exposure
- Road Safety Measures
- Road Safety Performance Indicators
- Economy and Management Indicators

An extract of this detailed survey formed the short questionnaire which was distributed in the context of a Road Safety workshop in Nairobi (Kenya), sponsored by the joined efforts of The World Bank – IRTAD, in December 2016. Representatives from 20 African (English speaking) countries, mainly from the West, East and South regions of the African continent participated (Figure 1). A similar meeting for northern and generally French speaking African countries was held in Marrakesh (Morocco) in spring 2017.

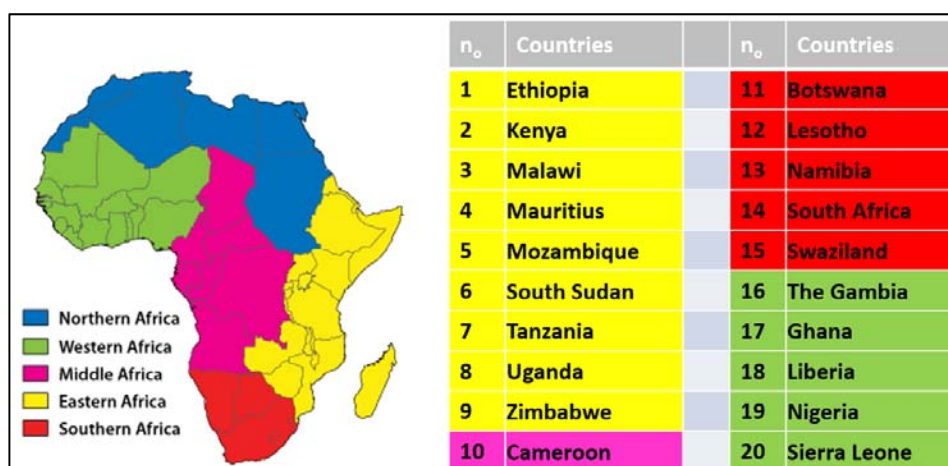


Figure 1: African countries participating in the short survey.

Since the objective of the short survey was to understand basic road safety aspects and definitions, mainly questions related to practices from the road safety management as well as data collection points of view were raised. It was structured with 10 core questions



accompanied with several explanatory queries (no more than 15 questions in total) the majority of which were based on a Yes – No reply.

For all the 20 contributing countries in Nairobi, most of the respondents had a significant experience in the field of road safety (over 10 years), thus the information they provided is considered accurate and reliable.

Experts from all countries stated emphatically the high importance of data and knowledge to support road safety activities. This is a clear indication of the urgent need for the improvement of data and information availability with regard to the improvement of road safety in African countries.

The present paper, by presenting the results of the short questionnaire, aims to describe the basic fields that should be raised in order to assess in general terms the characteristics of a country's road safety management and data collection practices. In the following sections, indicative results of the short survey are presented and discussed.

3. Survey results

Road safety management practices are considered a tool for the assessment of road safety legislation, policy and institutional capacity. Towards this direction it is essential to understand issues related to

- Institutional organization, coordination and stakeholders' involvement
- Policy formulation and adoption
- Monitoring and evaluation

which moreover consist the main fields of this survey.

Analysis of the survey responses resulted in the following interesting observations:

As far as institutional organization is concerned, the majority (75%) of the countries revealed that a Lead Agency has been established to prepare policy orientations – directions for road safety, where another 85% acknowledged the Parliament's role in decision making.

Regarding the level of road safety policy formulation and adoption, 70% documented an official national Strategy for improving road safety performance already been set. Moreover, 19 countries (95%) recognized ongoing medium-term quantitative targets (4-10 years). In order to further clarify the nature and general status of these targets, certain sub-questions were raised.

At first, the stakeholders were asked whether such targets have been defined either on a purely national political basis (top-down), on the basis of the UN Decade of Action road safety target (-50% in 2020), or using a rational process based on known key problems and potentially efficient measures (bottom-up). The answers are shown through Figure 2 where it can be seen that some countries have set targets in more than one field. The most important finding of Figure 2 is the fact that targets set by global organizations, although general, seem to be more acceptable since they are always challenging, increase the competition between countries and are more understandable by the public.



Such targets are usually related to fatalities. However, medium term quantitative targets of road safety strategies worldwide focus more and more on injuries caused by road accidents and not only on fatalities. This tendency is also shown in the following response of the stakeholders (Figure 3). More specifically it can be seen that 80% of the targets are related to fatalities reduction and about 35% on serious injuries reduction respectively.

The effectiveness of potential measures to reach a road safety target are continuously monitored and assessed through intermediate safety performance indicators (SPIs). This fact seems to be recognized and adopted in 10 (50%) of the questioned countries (Figure 4).

Monitoring and evaluation of the implemented strategies and measures is a key component of every successful road safety policy. A basic prerequisite however is the provision of sustainable systems to collect and manage data on road fatalities and injuries. Such systems which need to be durable as well as funded and maintained on a regular basis are present in 50% of the countries.

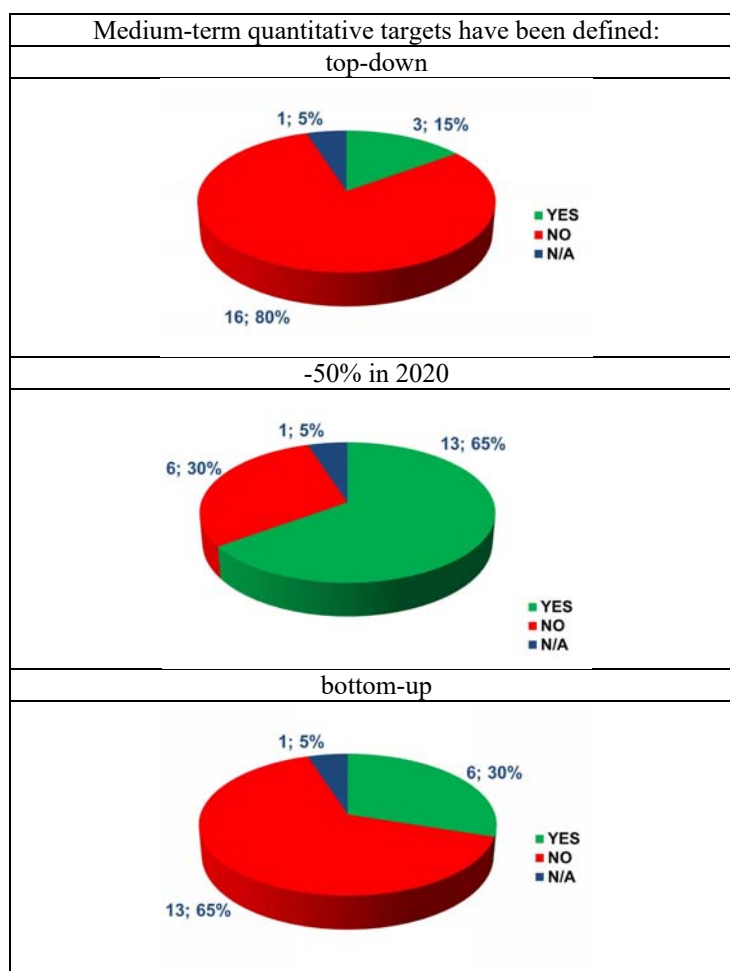


Figure 2: Grouping of medium-term quantitative targets.

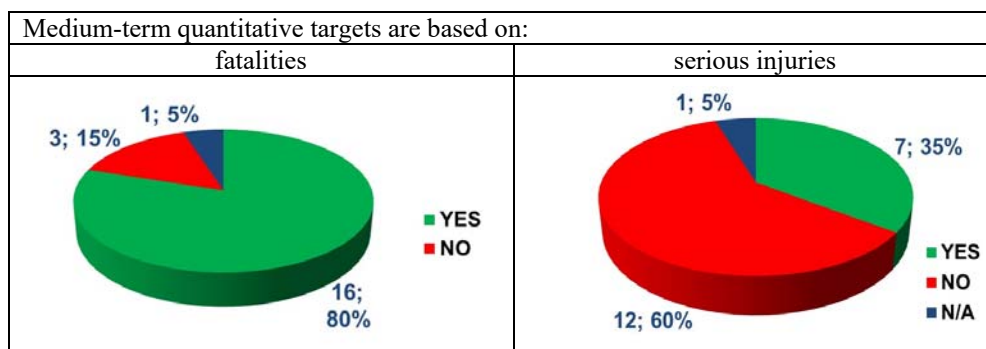


Figure 3: Medium-term quantitative targets based on fatalities and serious injuries reduction.

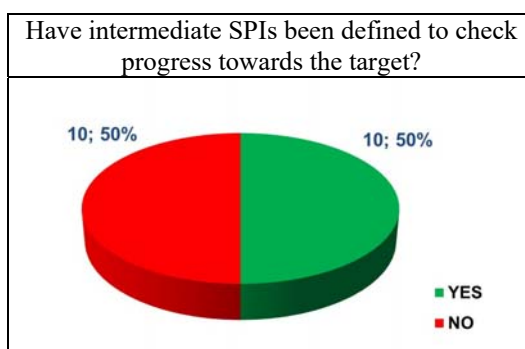


Figure 4: Grouping of medium-term quantitative targets.

Moreover, the success and efficiency of a monitoring and evaluation process is strongly dependent on the existence of a central organization in charge of the road safety data systems. Such organizations are found in 13 (65%) of the countries.

The existence of a reporting process to monitor road safety interventions is another issue of general concern. Such a procedure has been set up in less than the half of the questioned countries (40%).

Respondents were also asked whether “benchmarking” is used to monitor progress in the road safety situation relatively to other European countries. It was a pleasure to see that 13 countries (65%) replied positively.

The general problem of underreporting of road accidents was highlighted by the stakeholders who, in their vast majority (90%) conceded that road accident databases do not link police and hospital data. This issue is further emphasized in the detailed survey where although it is regarded as a high priority by almost all the stakeholders, the availability of such combined data is extremely low.

In order to be able to develop the most appropriate and successful road safety programmes, relevant stakeholders are in need of specific information mainly concerning measures. One



important issue is to have standardised procedures and methods for carrying out evaluations of road safety measures and thus acquire comparable results on their effectiveness. Such procedures are currently available in less than half of the questioned countries (45%).

4. Conclusions

In the framework of the SaferAfrica project, basic road safety aspects and definitions in African countries were explored. In total 20 countries contributed mainly from the West, East and South regions of the African continent and more than one stakeholder per country participated in the relevant survey providing an adequate sample.

The present paper, by presenting the results of this survey, aims to describe the basic fields that should be raised in order to assess in general terms the characteristics of a country's road safety management and data collection practices. More specifically, the following fields of road safety management were tackled:

- Institutional organization, coordination and stakeholders' involvement
- Policy formulation and adoption
- Monitoring and evaluation

Based on the stakeholders' responses it was found that there is a significant demand for data and knowledge in order to support road safety activities and mainly road safety measures. Currently, such information is poorly available in the examined countries. This is a clear indication of the urgent need for the improvement of data and information availability with regard to the improvement of road safety in African countries.

Another interesting outcome is the fact that the questioned countries seem to favor targets set for the African continent as a whole. This can be explained by the fact that such targets are always ambitious, increase the road safety consciousness of both stakeholders and public and are more understandable.

Underreporting is an additional crucial finding since police and hospital data are not currently being linked. This issue will be further assessed in the ongoing project and certain actions are to be introduced.

The above results indicate a general lack of the necessary road safety information and data in African countries. It should be noted that such lack of availability of data and information necessary to road safety stakeholders for effective decision-making further prevents the improvement of road safety. Therefore, efforts should focus on closing the existing gaps in knowledge on road safety related issues.

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