THE AFRICAN ROAD SAFETY OBSERVATORY – AFRICAN RSO

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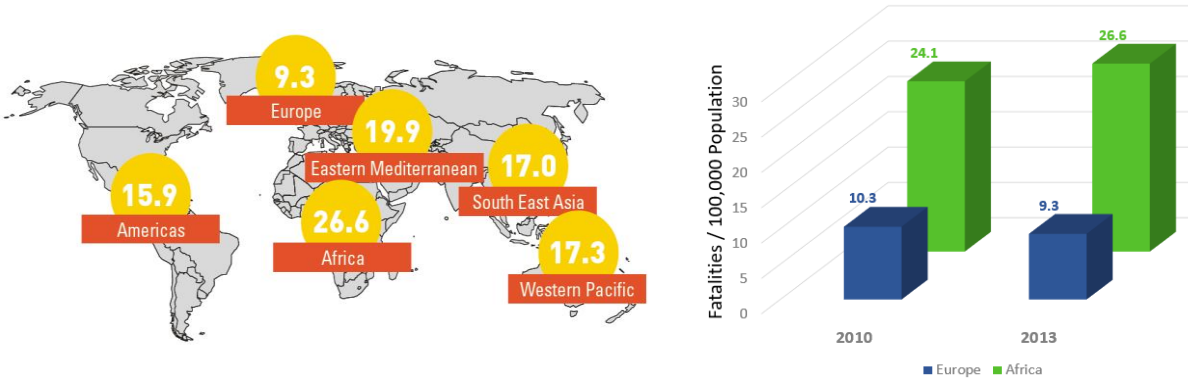
ABSTRACT

Within the research project "SaferAfrica - Innovating Dialogue and Problems Appraisal for a Safer Africa" the "African Road Safety Observatory (African RSO)" was developed in order to support stakeholders with evidence on key risk factors and related good practices using high quality data and knowledge. The African Road Safety Observatory follows the structure of the European Road Safety Observatory and is adjusted to the road safety status in Africa, the availability and quality of relevant data and consequently the needs of African road safety stakeholders. The main sections of African RSO are presented in and the required inputs and outputs are discussed.

Key words: road safety observatory; road safety; SaferAfrica; crowdsourcing functions

1. INTRODUCTION

Africa is the worst performing continent in road safety. As shown in Figure 1a, the mortality rate in Africa (26.6 fatalities/105 population) is almost three times that of Europe's, where the number of road fatalities represents 31% of the relevant global figure. However, the most disturbing concern is the fact that the disparity in road safety results seems to be increasing. More specifically, according to the World Health Organisation (WHO, 2015), in Europe 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 Africa, increased from 24.1 per 100,000 population to 26.6 per 100,000 population (Figure 1b). As far as Africa is concerned, road trauma is expected to worsen further, with fatalities per capita projected to double from 2015 to 2030 (WHO, 2015).



(a) (b)

Figure 1(a, b). Mortality rate (fatalities/100,000 population) per region, WHO 2015.

Despite these pressuring and unfavourable potentials, several actions are already ongoing and important documents are already in place, paving the way for road safety improvements. Such an example is the African Road Safety Action Plan 2011-2020 developed by the common effort of the African Union (AU) and the United Nations Economic Commission for Africa (UNECA, 2010).

In order to improve road safety performance in African countries, 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. There is a serious lack of road safety data in African countries, and even when data are available [e.g. through the reports of WHO (2015), International Road Federation – IRF (2016), etc.], little is known about data collection systems, definitions, etc.

Within this ambitious challenge, Europe could play an important role in supporting African countries to improve their road safety and traffic management performance.

Such considerations are addressed through the SaferAfrica project, an Horizons 2020 Coordination and Concerted Action; a joint effort between 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. Moreover, besides African governmental organizations, research institutions and NGOs, the involvement of a large number of African actors represented by prominent institutions operating in Africa ensures a mostly extensive coverage

of the African continent. The project started in October 2016 and will be completed in September 2019.

Among the key objectives of the SaferAfrica project is the support of policy makers and stakeholders with evidence on critical risk factors, related actions and good practices drawn from high quality data and knowledge. For such an elemental provision the development of an African Road Safety Observatory (African RSO) is essential. The African Road Safety Observatory is structured using the relevant European Road Safety Observatory as reference, where certain adjustments are foreseen in order to serve the specific needs of African stakeholders and the particularities of road safety problems in African countries.

The present paper describes the collection and analysis process of the required road safety data and knowledge in African countries in order to setup such a valuable tool able to analyze and facilitate the dissemination of road safety data, identify risk factors, support the definition of effective and efficient policies – measures, provide specialized information - opinions on specific issues for users and mostly introduce good practices.

2. EXISTING ROAD SAFETY OBSERVATORIES AT REGIONAL LEVEL

Worldwide, a number of organizations, national and/or international agencies activated in promoting road safety have joined their efforts in establishing Regional Road Safety Observatories. Such observatories serve as knowledge platforms where best practices and expertise are being shared among stakeholders and road safety policy planners.

The main objective of such Observatories is to facilitate better coordination between neighbor governments through the establishment of a noble emulation framework and support countries of the same region to realise the necessity for common evidence based actions in developing, promoting and supporting effective road safety policies.

A brief description of such platforms are presented in the following paragraphs.

2.1 Ibero-American Road Safety Observatory

The Ibero-American Road Safety Observatory (OISEVI, www.oisevi.org) is an international cooperation instrument bringing together the highest road safety authorities of Ibero-American member countries.
OISEVI's main objective is to

- coordinate road safety strategies and initiatives at the regional level, based on the generation of timely, objective and reliable information
- effectively contribute to reducing accident rates in Ibero-America, within the framework of the United Nations Decade of Action for Road Safety 2011-2020

The Ibero-American Road Safety Observatory was established as a body during the 20th Meeting of the United Nations Road Safety Collaboration (UNRSC), held in the city of Geneva, Switzerland (2014).

2.2 European Road Safety Observatory

A key element in EU's 2003 Road Safety Action Programme concerned the development of a new European Road Safety Observatory (ERSO) to gather data and knowledge in order to

inform future safety policies. The development of the Observatory was undertaken by the Sixth Framework funded project SafetyNet (2004), an integrated project funded by DG-TREN of the European Commission.

The objective of the Observatory was to support all aspects of road and vehicle safety policy development at European and national levels. Through the SafetyNet project, where 22 institutes from 17 countries cooperated, new proposals for common European approaches in several areas including exposure data and SPIs were delivered. Moreover, the CARE database was extended to incorporate the new EU Member States and new fatal and in-depth accident causation databases were developed as well as new statistical methods that can be used to analyse combined macroscopic and other data.

The SafetyNet project was completed in 2008 and the ERSO website contents were later updated and expanded by the DACOTA (2008) project. Since then, the results of the EU funding research projects on road safety are available to the public, the ERSO toolbox has been redesigned in order to communicate such initiatives.

Currently, the ERSO website has been transferred to the Road Safety section on the website of the European Commission, Directorate - General for Mobility & Transport (https://ec.europa.eu/transport/road_safety/specialist/erso_en). This reformed profile of ERSO covers a large range of road safety knowledge; from accidentology and infrastructure to policy assessments. All documents are easily accessible free of charge.

3. DEVELOPING THE AFRICAN ROAD SAFETY OBSERVATORY

Within the SaferAfrica project, a pan-African road safety data and knowledge centre is developed in order to support policy makers and stakeholders with evidence on critical risk factors, related actions and good practices drawn from high quality data and knowledge. In this framework, road safety data and safety performance indicators of African countries are collected and analysed and main risk factors are identified. This work served as the basis for the development of the African Road Safety Observatory (African RSO, www.africanroadsafetyobservatory.org).

The project activities are oriented to the “Safe System” approach and grouped in four pillars namely road safety knowledge and data; road safety and traffic management capacity review; capacity building and training; sharing of good practices. In order to develop an ergonomic, user-friendly and efficiently designed web portal, feedback in terms of information, data and findings from project tasks on these pillars are provided as well.

More specifically, on the basis of the results of the analyses within the SaferAfrica project, a set of high quality data, knowledge and management tools are being developed to support and increase the awareness of stakeholders, policy makers and other users in obtaining evidence-based views of road safety problems and challenges, as well as insights for potential actions and priorities.

As seen in Figure 2, African RSO is structured based on certain core sections, a brief description of which is provided in the following paragraphs.

The "Dialogue” section is the heart of African RSO, aimed at promoting a road safety culture through the so called “Dialogue Platform” (DP). The DP represents a high-level body,

established within the SaferAfrica project, with the objective of providing recommendations to update the African Road Safety Action Plan and the African Road Safety Charter, as well as fostering the adoption of specific initiatives, properly funded. The DP consists of two different levels; the Technical level and the Institutional level.

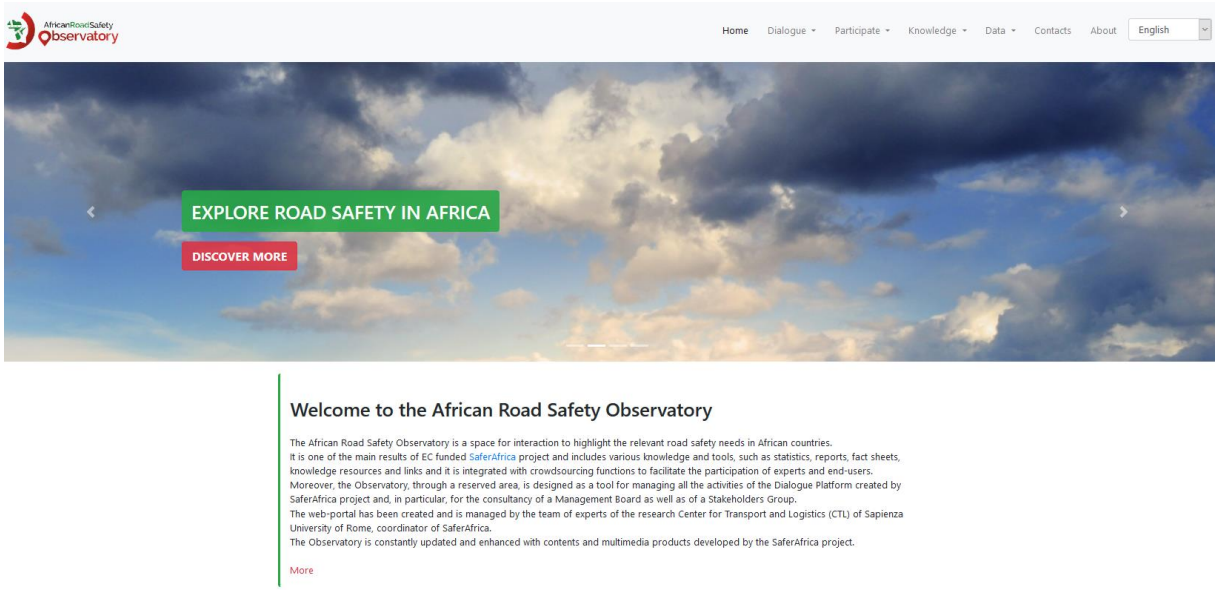


Figure 2. Profile of African Road Safety Observatory.

The Technical level comprises of both African and European government and research institutions, international institutions and organisations for citizen representation (e.g. NGOs) and acts as an advisory board to the Institutional level by providing guidance and recommendations on strategic and investment priorities. Among these bodies, subjects not involved as project partners are part of the Stakeholders Group. At this level, various Working Groups are in charge of specific road safety and traffic management topics and suggest activities to the Institutional level.

The Institutional level, ran by a Management Board, comprises representatives of existing institutions and competent authorities at the country and continent levels tackling regulatory, financing and planning issues in the different fields involved in road safety. The actors belonging to this level include: the African Union, economic and financial institutions (e.g. African Regional Economic Communities), multilateral development banks and other relevant international organisations working in the African continent. At this level, the evidence stemming from the work done on the Technical level is discussed and decisions are made on the basis of value-for-money assessments. The initiatives include projects or partnerships (e.g. twinning programs) between African and EU partners, policy recommendations to ensure the achievement of the Action Plan objectives, etc.

Both African RSO as well as the DP are anticipated to act as individual and stable bodies, capable of operating beyond the end of the SaferAfrica project.

The African Road Safety Observatory, strongly encourages public participation. In the “Participate” section, certain crowdsourcing functions serve as a networking platform through which end users could contact experts and other stakeholders, submit questions or data and exchange knowledge and experiences.

A crucial in terms of importance and information variety content of African RSO is the "Knowledge" section where outcomes directly related to certain work packages from the SaferAfrica project are provided through the following sub-sections:

- Road Safety Management
- Capacity Building
- Good Practices

The "Road Safety Management" subsection is aimed at assessing the status of traffic and road safety management, with a view towards developing remedial and sustainable programs and actions to fundamentally improve traffic and road safety management. Relevant documentation supporting road safety management initiatives are also provided.

However, the most important entity in this subsection, is the development of African guidelines – recommendations for establishing and/or improving national road safety agencies. The guidelines draw a direct link between the primary road safety management guidance prepared by the World Bank and the experience of African road safety agencies, and are intended to be used as the basis for developing concrete, country-specific recommendations for the strengthening or creation of national agencies responsible for road safety and traffic management.

Another interesting subsection is the "Capacity Building" area which aims at identifying training, research and innovation needs of staff involved in road safety related activities and develop capacity building programs focused on road safety in African countries. African stakeholders must become owners of the problems and be responsible for developing and implementing the appropriate solutions with appropriate technical assistance, as necessary.

The overall objective of the "Capacity Building" subsection is to highlight and assess the needs for training and education on road safety and specify the content of the training activities by providing modules and tools for efficient training (e.g. train-the-trainers).

In the "Good Practices" subsection a collection of effective road safety measures and policies from African and global experiences related core road safety fields such as infrastructure, behaviour, vehicle and management points of view are presented. A systematic analysis of African good practice measures is carried out and both successful and non-successful solutions are outlined interactively at both measure grouping (infrastructure, behaviour, vehicle, management) as well as geographical level (country, region and continent).

Since road safety implementation modalities may vary considerably, and a road safety measure that is effective in one country is not necessarily similarly effective elsewhere, a key factor during such an evaluation process is the transferability. Therefore, the most interesting parts of a transferability audit, where different African stakeholders and experts provide opinions about the adaptation of road safety measures in different contexts, according to factors as society/culture, institutions and economy, are presented as well. Special emphasis is given to identify and highlight road safety measures and policies which have shown high potential for casualty reductions in African countries, as reported through various documents (e.g. mid-term review of the African Action Plan), in order to be further supported and potentially implemented in other countries as well.

Every core subsection holds key resources in order to support the respective thematic field and bring together key publications and manuals that may be used by policy makers and stakeholders in Africa (e.g. legislation, strategies, guidelines and standards, ERSO resources

and recommendations, WHO road safety manuals, OECD/ITF reports, African road safety publications, etc.).

Among the most important contents of African RSO is the "Statistics" section where a variety of information related to road safety is provided; namely, road accident, fatalities and injuries data (comprehensive database), survey collected data, statistics tables and statistics resources. Reliable and accurate data are a fundamental prerequisite to understand the magnitude of road safety problems in Africa and convince stakeholders to take certain actions. Reliable and accurate data are also needed to identify problems, risk factors and priority areas in order to formulate strategies, set targets and monitor performance.

In terms of existing road safety databases, two analysis documents were exploited; namely the Global Status Report on Road Safety (WHO, 2015) and the IRF World Road Statistics 2016 (IRF, 2016) reports.

Unfortunately the varying quality of data collection process among the African countries is not the only barrier that makes impossible a direct data comparison. Another issue of concern is the comparability of data and the potential of using different databases in a complementary way. For example, concerning the fatality data, the review revealed that different definitions are used among the countries. On the other hand, the comparison between WHO and IRF databases revealed that while the IRF uses the 30-days definition for fatalities in road accidents, the published data are the one reported by the national sources, which have different definitions. Thus, the data cannot be comparable among the countries, without being processed before, while attention is needed when combining the two databases. In order to take into account under-reporting issues and achieve comparability, statistical models have been developed to estimate the number of fatalities (WHO).

As an initial approach, existing national data was gathered, assessed and processed to improve their quality. However, safety data should be enhanced through additional data and indicators, which may be available at the individual country level but are not currently published (e.g. exposure data, road safety performance indicators, road safety management, etc.).

As a final step, data were analysed to provide a factual appraisal of road safety level in Africa, reveal critical issues and indicate priority areas with high potentials for road safety improvement. Such analyses include a variety of statistical reports and fact sheets and are presented through tables, graphs, or combined infographics, which the user may view interactively, in terms of navigation per country, region, or the entire African continent.

Apart from the core sections described above, the African RSO includes links to the European Union’s Horizon 2020 research and innovation programme (http://ec.europa.eu/programmes/horizon2020/en/area/transport), the SaferAfrica project website (http://www.saferafrica.eu/), to a list of key African road safety stakeholders and key road safety web-resources. Finally, the latest news (events, conferences, etc.) are published in a dedicated area of the portal.

4. DISCUSSION

Road safety in Africa is poor and is expected to worsen further. The paper presents the web portal developed in the context of the SaferAfrica project in order to support policy makers and stakeholders with evidence on critical risk factors, related actions and good practices drawn from high quality data and knowledge. The African Road Safety Observatory, for

which the relevant European Road Safety Observatory stands as a reference, is further integrated with crowdsourcing functions; thus, serving as a networking platform through which end users could contact experts and other stakeholders, submit questions or data and exchange knowledge and experiences.

The mission of the African Road Safety Observatory is to:

- Provide a tool for African citizens to highlight the relevant road safety needs, emerging road safety issues in a country and to make a proposal of measures or policies to enhance road safety
- Monitor the existing strategies and implemented road safety policies in African countries
- Provide a space for interaction with stakeholders and networking of relevant actors
- Collect road safety data from various national and international (WHO, IRF) sources;
- Present the road safety situation and trends at national, regional and continental level through the use of text, graphs, tables and maps
- Analyse data and provide recommendations to improve road safety in Africa
- Promote road safety good practices to policy makers supported by proven efficacy and transferability assessment

A further challenge for the future is to maintain the operation of both African RSO as well as the Dialogue Platform and further enhance their significant contribution in improving road safety performance in Africa.

At present the African RSO has been launched and is continuously updated based on the work carried out and the findings reached from SaferAfrica project. The full operation of the African Road Safety Observatory is expected approximately in mid-2019.

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