

# **A PROPOSED MINIMUM SET OF ROAD SAFETY INDICATORS FOR DATA COLLECTION, ANALYSIS AND REPORTING BY ALL AFRICAN COUNTRIES.**

PRESENTED BY DR PIETER VENTER

Advisor for

Global Road Safety Partnership

FIA

SSATP

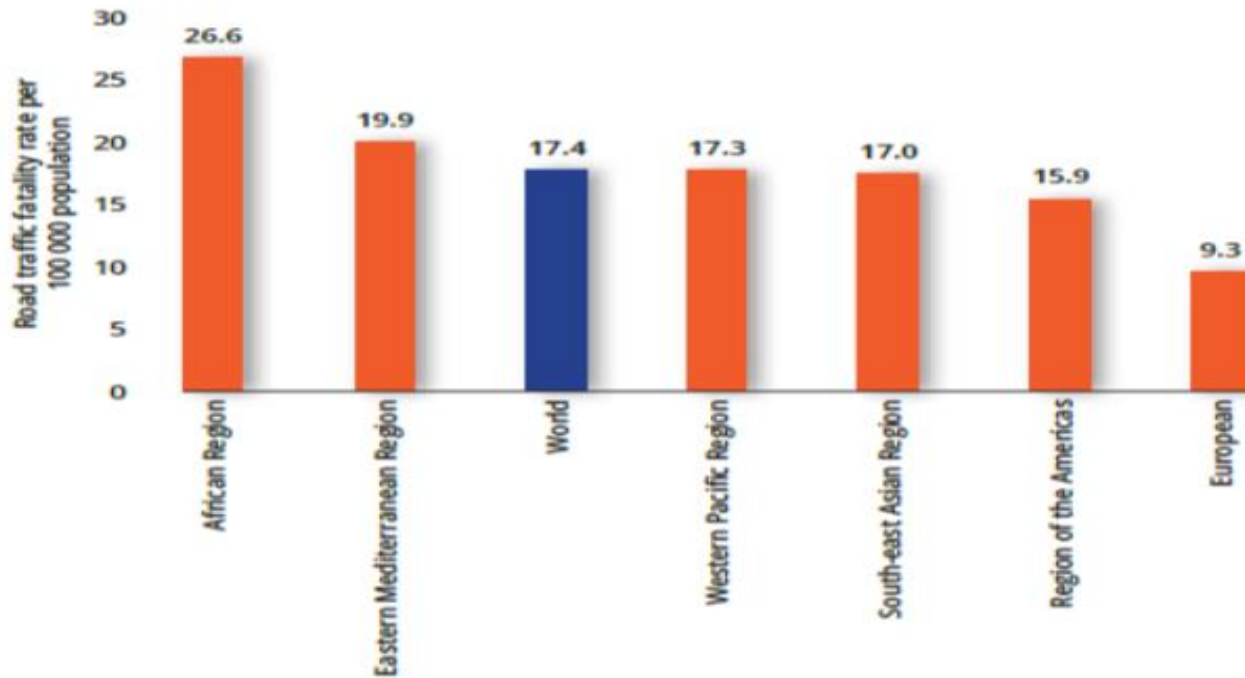
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# WHO 2105 GLOBAL ROAD SAFETY STATUS REPORT

- Africa region, road traffic fatalities increased from 24.1 per 100,000 population in 2010 to 26.6 per 100,000 population in 2013.

Road traffic fatality rates per 100 000 population, by WHO region



# WHO Status Report ctd

- Lack of detailed knowledge on the number of road crashes and fatalities occurring in Africa
- Lack of information on factors leading to road crashes or affecting their consequences
- Estimates the number of road fatalities in Africa was 31% of world total in 2013

# WHO Status Report ctd

- 40% African countries have not taken sufficient action in:
- Establishing/strengthening/harmonising the injury data system
- Engaging local research centres
- Building capacity for road safety data management
- Mandatory reporting using standardised data
- Sustainable funding for road safety data management.

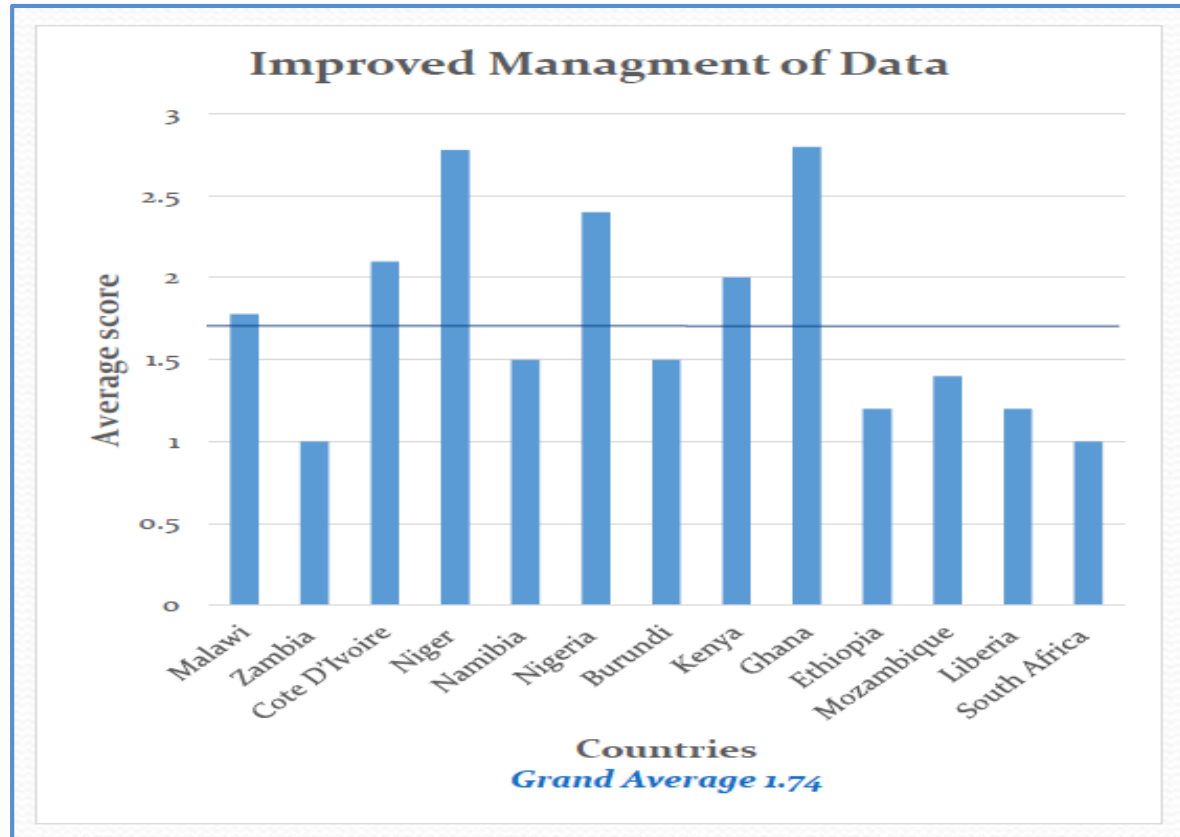
- Fewer than 18% of countries monitor indicators such as seatbelt or helmet-wearing rates.

# UNECA Survey: self-assessment of data management (a)

## Parameters assessed:

- National database
- Mandatory reporting
- Analysis and reporting system
- Harmonised data
- Harmonised vehicle and driver registration system
- Data management capacity
- Engage local research centres
- Enhance injury data system
- Enhance baseline data on road safety

# UNECA Survey: self-assessment of data management (b)





# EFFECTIVE DATA MANAGEMENT SYSTEMS

Requirements for effective analysis, comparison and decision making:

- Accuracy (exact description)
- Complexity (include all features)
- Availability (accessible to all users)
- Uniformity (apply standard definitions)

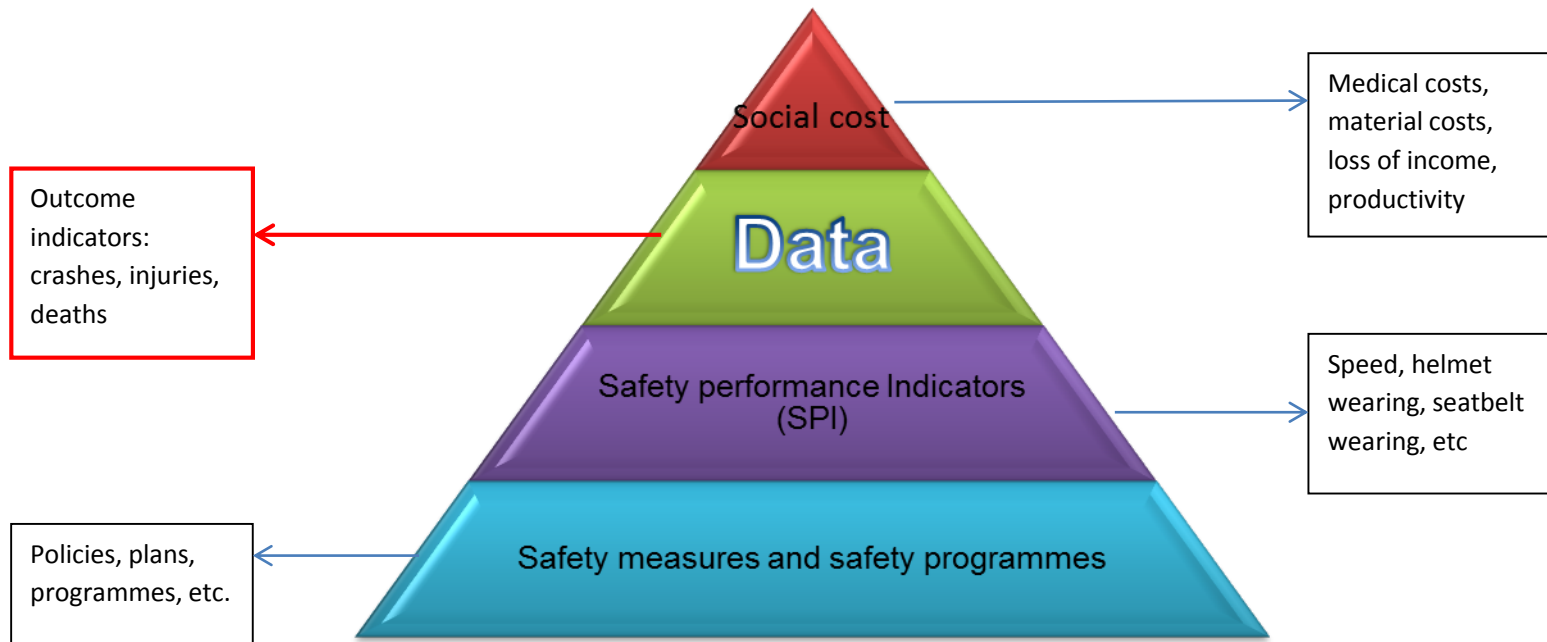
Uniformity is of vital importance for comparisons on *national* as well as *international* level.

# INTERNATIONAL COMPARISONS

International comparisons provide:

- A comparison picture of national crash data
- A ranking of countries
- An indication of urgency of international support
- Information on development and progress
- Identification of weak areas in the safety system
- Differences in the safety levels of users and roads

# CRASH DATA WITHIN A ROAD SAFETY INFORMATION SYSTEM



# CHALLENGES FACED IN ROAD SAFETY DATA MANAGEMENT

- People
- Processes
- Technologies

# PEOPLE

- Level of training
- Lack of understanding of definitions and interpretations
- Lack of understanding of importance of data collection
- Data collection neglected or incorrect
- Lack of understanding of importance to complete crash report
- Underreporting

# PROCESSES

- Inaccurate capturing of data from crash report forms
- Timeliness of data affected by number of times forms are handled and capturing delayed
- Delays caused by processes handled by offices outside the custodial office
- Inaccuracy as a result of “errant keystrokes”

# TECHNOLOGIES

- Electronic data collection can improve timeliness, accuracy and completeness
- GPS and GIS maps can more precisely determine location of crashes
- “Data Warehouse” assist with availability of data and integration with other systems



# HARMONISATION AND STANDARDISATION OF ROAD SAFETY INFORMATION

- Harmonisation of crash data at national level is beneficial for road crash analysis - more common variables and values across the African countries.
- Road accident data are not always comparable due to different national crash data collection systems .
- Data variables and values are collected under different definitions
- Data collection forms have different structures and the relevant data fill-in systems cannot be compared.
- Crash data quality and availability are affected and data analyses and comparisons among African countries are not always reliable.

# ROLE OF ROAD SAFETY OBSERVATORIES

- Observatories are focused on gathering more information than just crash data.
- They provide evidenced-based approaches to draft successful road safety policies – backed up by crash and other road safety data.
- Information collected by observatories includes:
  - series of data protocols and collection methodologies
  - national and in-depth crash data
  - exposure data, and
  - safety performance indicators.

# AFRICAN ROAD SAFETY OBSERVATORY

Role players supporting establishment of an African road safety observatory:

- SSATP
- FIA
- SaferAfrica
- IRTAD

# SaferAfrica SURVEY

Survey involving 20 countries revealed:

- 75-85% indicated that they do have:
  - a road safety lead agency
  - they have a National strategy for road safety
  - they have national medium term quantitative targets
- The targets are not defined on known key problems and efficient measures
- The targets are only based on fatalities and not injuries
- 50% have not defined road safety performance indicators
- 50% do not have sustainable systems in place to collect and manage data on crashes, fatalities and injuries
- Crash databases are not linked to other databases such as those of hospitals
- 55% do not have a reporting procedure to monitor road safety interventions

# PROPOSED MINIMUM SET OF INDICATORS

Variations in the African data collection systems and the type and quality of data collected necessitates the development and provision of a harmonised (standardised) minimum set of indicators within a structure which allows for maximum flexibility to add on indicators to fulfil individual countries' needs.

# TYPICAL INFORMATION TO BE OBTAINED FROM DATA

- What type of vehicles are involved in crashes (age, type)
- What kinds of features in road infrastructure are involved in consequences of crashes (trees, guide rails, poles, etc.)
- What type of roads are crashes most commonly occurring on?
- Which gender/age is more likely to be involved in crashes?
- Which hours or day period are the most dangerous in terms of number of crashes?

- Which crashes can something be done about technically? ( vehicle or road infrastructure)
- Which protective measures have the highest benefit for reducing crashes?
- What type of countermeasures could save lives?
- Which crash type is most commonly fatal?

# PROPOSED MINIMUM SET OF INDICATORS

Countries minimum set	WHO minimum set	Crash related indicators (WHO, ETSC, CADaS)
X	X	Crash identification number
X	X	Crash date
X	X	Crash time
X	X	Crash location
X		Location relative to roadway
X	X	Crash type
X	X	Impact type
X	X	Weather conditions
X	X	Light conditions
X	X	Crash severity
X		Crash with pedestrians
X		Crash with parked vehicles
X		Single vehicle crash
X		At least two vehicles – no turning
X		At least two vehicles – turning or crossing



Countries minimum set	WHO minimum set	Road related indicators
X		Crash ID
		Latitude and longitude
X		Road
		Road kilometre
X	X	Type of road way
X	X	Road functional class
X	X	Surface conditions
X		Obstacles
		Emergency lane
X		Markings
X	X	Speed limit
	X	Road obstacles
X	X	Junction
X	X	Traffic control at junction
X	X	Road Curve
	X	Road segment grade
X		Urban area
		Tunnel
X		Bridge
		Number of lanes
X		Markings
		Work-zone related
X		Weather conditions

Countries minimum set	WHO minimum set	Vehicle related indicators
X		Vehicle registration number
X		Vehicle identification number (VIN, issued by manufacturer)
X		Registration place and year
X	X	Vehicle type
	X	Vehicle make
	X	Vehicle model
X	X	Vehicle year of manufacture
	X	Engine size
	X	Vehicle special function
X	X	Vehicle manoeuvre (what the vehicle was doing at the time of the crash)
		First point of impact
		Insurance
X		Hazardous materials

Countries minimum set	WHO minimum set	Person related indicators
X	X	Person ID
X	X	Occupant's vehicle number
	X	Pedestrian's linked vehicle number
X	X	Date of birth
X	X	Sex
X	X	Type of road user
	X	Seating position
X	X	Injury severity
X	X	Safety equipment
	X	Pedestrian manoeuvre
X	X	Alcohol use suspected
X	X	Alcohol test
X	X	Drug use
X	X	Driving licence issue date
X	X	Age
X		Distracted by device
X		Driver licence class
		Driver manoeuvre
		Journey, trip purpose
X		Hit and run

# RECOMMENDATIONS

- SSATP and UNECA should encourage countries to systematically and over time build the minimum set of indicators for data capturing and analysis into their road safety information systems.
- At the same time, recommendations on harmonised sampling and application methodologies should be given.