

Review of road crash data systems in African countries

TOWARDS THE ESTABLISHMENT OF A
ROAD SAFETY OBSERVATORY IN AFRICA
SECOND WORKSHOP, Abuja, 2-3 July 2018

Dr. Maria Segui-Gomez



Variables and data sources

- What to collect: crash, exposure, performance, attitudes, ...
- Why to collect it: evaluation, trend analysis, benchmarking, ...
- Where to collect it from: administrative data sets, *ad hoc* data sets, ...

- But, do we really need to start from scratch?

What to collect

What is being collected and how



Reviews done: Others

- Dakar meeting in February 2018, 7 countries attended and presented their reviews
- UNECE's country reviews (1 published)

Reviews done II: SSATP's own work

- <https://www.ssatp.org/en/topic/road-safety>
- Work commissioned to Dr. Pieter Vienter
- 15 countries either interviewed or visited
- Developed recommended minimum variable list (mostly crash-related)
- Later work augmented with preferred data source choice
 - *(this is the base for our discussion later in the agenda on variables)*

Reviews done III: Safer Africa



- www.saferafrika.eu
- EU-funded Project finishing in 2019
- Broader objectives, but includes a section on development of an “African Observatory” which currently exist as a web platform
- Two different surveys to 29 African countries. Respondents varied in profile.
- Five ongoing pilot studies (Burkina Faso, Cameroon, Malawi, South African and Tunisia) evaluating impact of road safety data management on its quality and accuracy.

Reviews done IV: EuroMed

- www.etsp.eu
- EU-funded Project finishing in 2020 with the target to create an integrated transport network in the region. This includes an assessment of data issues to strengthen their national data capacity.
- 7 countries (4 of them in Africa).
- Reviews were collected through site visits to countries and meeting with multiple stakeholders



Reviews done V: Country profiles

- FIA-initiative soon public at www.fia.com
- Compilation of all data reported by countries to different international organizations
- 220+ indicators organized by burden, the 5 pillars, and country background. Includes reported data AND performance and SUM4all indicators on road safety which have been recently adopted
- All countries in the world available, including 54 African countries

Country profiles II -More on the reporting sources

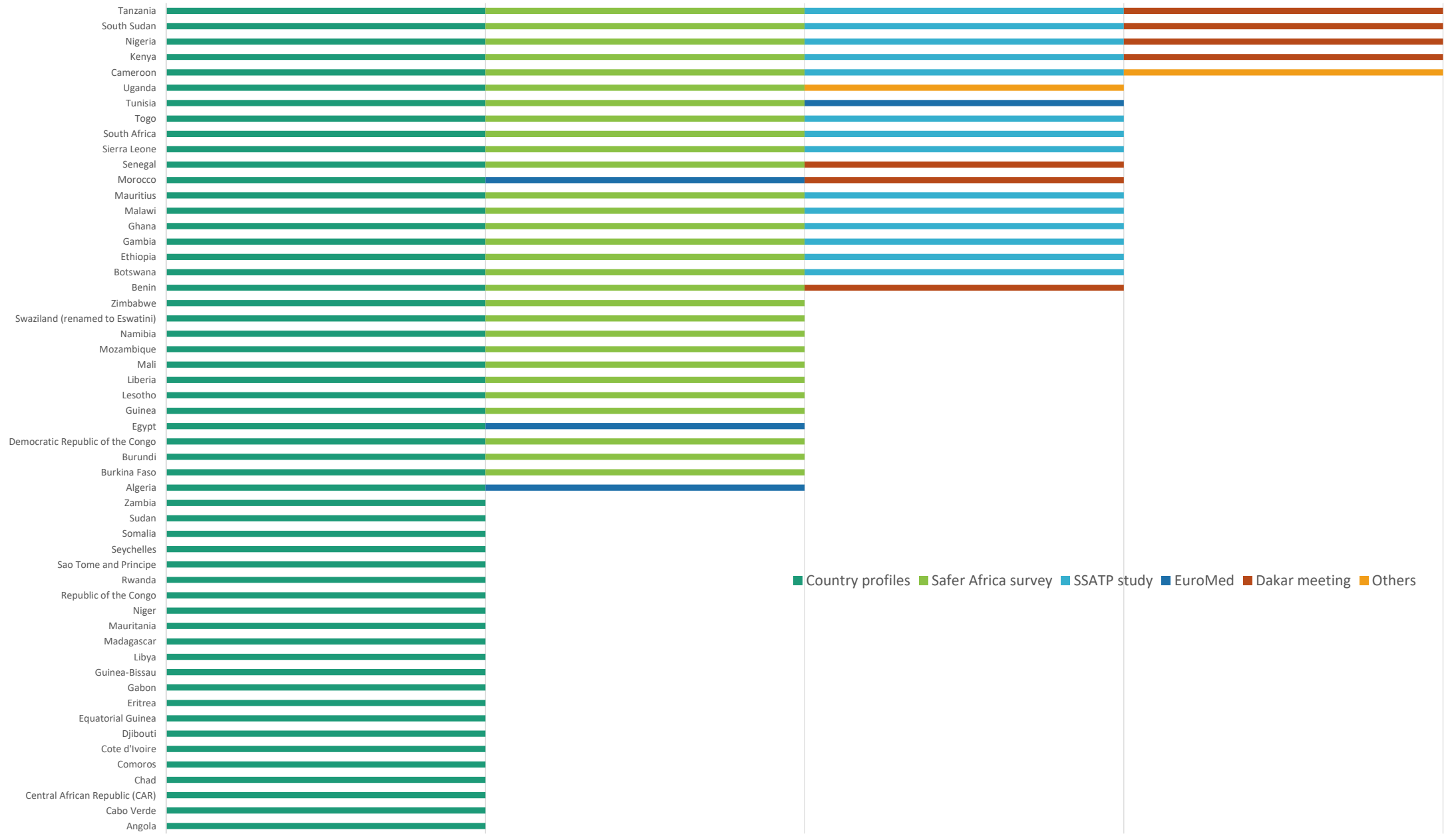
- World Health Statistics 2017: Monitoring health for the SDGs, Sustainable Development Goals, Appendix B Part 1 (pp 86-93): World Health Organization, 2017. Available online at <http://apps.who.int/iris/bitstream/10665/255336/1/9789241565486-eng.pdf?ua=1>
- Institute for Health Metrics and Evaluation. Country profiles. Available online at <http://www.healthdata.org/results/country-profiles>.
- Global Status report on road safety 2015, p 264-322 World Health Organization, Geneva. Available online at http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/
- Institute for Health Metrics and Evaluation Health related SDGs. Available online at <https://vizhub.healthdata.org/sdg/>
- Road Safety for All. Sustainable Development Goals FIA, Geneva 2016
- Torfs K., Meesmann U, Van den Berghe W, Trotta M (2016). ESRA 2015-The results. Synthesis of the main finding from the ESRA survey in 19 countries. ESRA project (European Survey of Road User's Safety Attitudes). Brussels, Belgium: Belgian Road Safety Institute. Available online at <http://esranet.eu/deliverables-publications>.
- World Bank's <http://siteresources.worldbank.org/EXTCORPPROUREMENT/Resources/VendorInsuranceRequirements.xls>
- Information on conventions and regulations accessed by each country are available online at http://www.unece.org/fileadmin/DAM/trans/conventn/agree_e.pdf. Current file dated 17/07/2017
- International Road Federation World Road Statistics 2016, Data 2010-2014, IRF Geneva 2016.
- Economic Commission for Europe, Inland Transport Committee. World Forum for Harmonization of Vehicle Regulations, 171st session, Geneva 14-17 March 2017 ECE/trans/Wp.29/343/r3v.25 (available online at <http://www.unece.org/fileadmin/DAM/trans/main/wp29/wp29regs/2017/ECE-TRANS-WP.29-343-Rev.25.pdf>)
- Among EU country members, [Directive on driving licences – 2006/126/EC](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0126:EN:NOT), https://ec.europa.eu/transport/road_safety/topics/driving-licence_en. In addition, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0126:EN:NOT>. Also, CIECA, www.cieca.eu.
- Signatories to ILO convention 153 can be found in: http://www.ilo.org/dyn/normlex/en/f?p=1000:11300:0::NO:11300:P11300_INSTRUMENT_ID:312298
- Signatories to UECE AETR can be found in: www.unece.org/trans/maps/un-transport-agreements-and-conventions-21.html
- WHO Emergency Care System Assessments available at <http://www.who.int/emergencycare/activities/en/>
- United Nations, Department of Economic and Social Affairs, Population Division (2016). The World's Cities in 2016 data booklet (ST/ESA/SER.A/392) available online at http://www.un.org/en/development/desa/population/publications/pdf/urbanization/the_worlds_cities_in_2016_data_booklet.pdf
- Global Report on Urban Health: Equitable, healthier cities for sustainable development. World Health Organization, Geneva, 2016. Full report available online at [file:///C:/Users/msegui-consultant/Downloads/9789241565271_eng%20\(1\).pdf](file:///C:/Users/msegui-consultant/Downloads/9789241565271_eng%20(1).pdf) Country specific profiles on urban health available online at [file:///C:/Users/msegui-consultant/Downloads/9789241565271_eng%20\(1\).pdf](file:///C:/Users/msegui-consultant/Downloads/9789241565271_eng%20(1).pdf)
- Information on 25 cities can be found in: Marks M, People near transit: improving accessibility and rapid transit coverage in large cities, ITDP (Institute for Transportation and Development Policy) report 2016. Available online <https://www.itdp.org/wp-content/uploads/2016/10/People-Near-Transit.pdf>
- World Economic Forum. Travel and Tourism competitiveness report 2017, <http://reports.weforum.org/travel-and-tourism-competitiveness-report-2017/2017>
- ...



Summary of reviews (2016-2018)

As of July 2018, 110 country-specific assessments in 54 countries

- Five countries (Cameroon, Kenya, Nigeria, South Sudan and Tanzania) are addressed in four reviews each.
- Fourteen countries (Benin, Botswana, Ethiopia, Gambia, Ghana, Malawi, Mauritius, Morocco, Senegal, Sierra Leone, South Africa, Togo, Tunisia and Uganda) have been reviewed in three independent processes each.
- Thirteen countries have two reviews each (Algeria, Burkina Faso, Burundi, Democratic Republic of the Congo, Egypt, Guinea, Lesotho, Liberia, Mali, Mozambique, Namibia, Eswatini –previously Swaziland), and Zimbabwe).
- The remaining 20 countries in the continent had one review each, the FIA-produced country profile.
- A few countries may have had additional reviews conducted in the past. For example, the project entitled ‘Extending the road safety research and development capacity in Morocco
- ...or



Country profiles Safer Africa survey SSATP study EuroMed Dakar meeting Others



0 1 2 3 4

Today ... 28 countries in the room 😊

- 23 of them with two or more reviews
 - Five countries (**Cameroon**, **Kenya**, **Nigeria**, South Sudan and **Tanzania**) are addressed in four reviews each.
 - Fourteen countries (**Benin**, Botswana, **Ethiopia**, **Gambia**, **Ghana**, **Malawi**, Mauritius, **Morocco**, Senegal, **Sierra Leone**, South Africa, **Togo**, **Tunisia** and **Uganda**) have been reviewed in three independent processes each.
 - Thirteen countries have two reviews each (Algeria, **Burkina Faso**, **Burundi**, **Democratic Republic of the Congo**, Egypt, Guinea, **Lesotho**, **Liberia**, **Mali**, **Mozambique**, Namibia, Eswatini –previously Swaziland), and **Zimbabwe**).
- Please note that within a few days you will all receive a folder with all reviews for your country

Joint conclusions: Strengths

- Ongoing efforts well received and actively participated in
 - Better understanding on what is happening and what is needed
- Available (free or low cost) software and hardware tools
 - *E.g., DRIVER (one of the presentations later on in agenda)*
- Implementation-ready criteria and operational definitions available
 - E.g., UNECE/IRTAD/WHO, MiniCadas,
- Previous experiences (e.g., Europe, OISEVI)
- National and international attention and some resources, including the establishment of the UN Road Safety Fund Trust
- Increasing political awareness

Joint conclusions: Weaknesses

- Measurement of burden
 - fatalities (police counts vs. Health information systems counts)
 - *Hence, a special session in our agenda today*
 - non fatalities
- Heterogenous crash data-related systems
 - *Another special sesión in our agenda today*
- Little information on performance indicators
 - *Thus, the next 3 slides*
- Biases in data collection (and analysis)

What to collect













What else needs to be collected and how



Country Profiles III. Criteria for variable input

- Either already collected by international bodies
- Or soon to be requested by them :
 - UN`s Sustainable Development Goals (Ref: Technical Report by the Bureau of the United Nations Statistical Commission on the process of the development of an indicator framework for the goals and targets of the post 2015 development agenda (working draft))
 - WB`s Sustainable Mobility for All (Ref: Global Mobility Report 2017 Tracking Sector Performance. Sustainable Mobility for all (SUM4ALL) 2017 Transport and ICT Global Practice, The World Bank Group. DRAFT October 2017)
 - Voluntary Global Performance Targets for Road Safety Risk Factors and Service Delivery Mechanisms (Developing voluntary global performance targets for road safety risk factors and service delivery mechanism.



<p>TARGET 1 2020</p>  <p>Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.</p>	<p>TARGET 2 2030</p>  <p>Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.</p>	<p>TARGET 3 2030</p>  <p>Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.</p>	<p>TARGET 4 2030</p>  <p>Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.</p>
<p>TARGET 5 2030</p>  <p>Target 5: By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.</p>	<p>TARGET 6 2030</p>  <p>Target 6: By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.</p>	<p>TARGET 7 2030</p>  <p>Target 7: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.</p>	<p>TARGET 8 2030</p>  <p>Target 8: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.</p>
<p>TARGET 9 2030</p>  <p>Target 9: By 2030, halve the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.</p>	<p>TARGET 10 2030</p>  <p>Target 10: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.</p>	<p>TARGET 11 2030</p>  <p>Target 11: By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.</p>	<p>TARGET 12 2030</p>  <p>Target 12: By 2030, all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care.</p>

Additional performance indicators

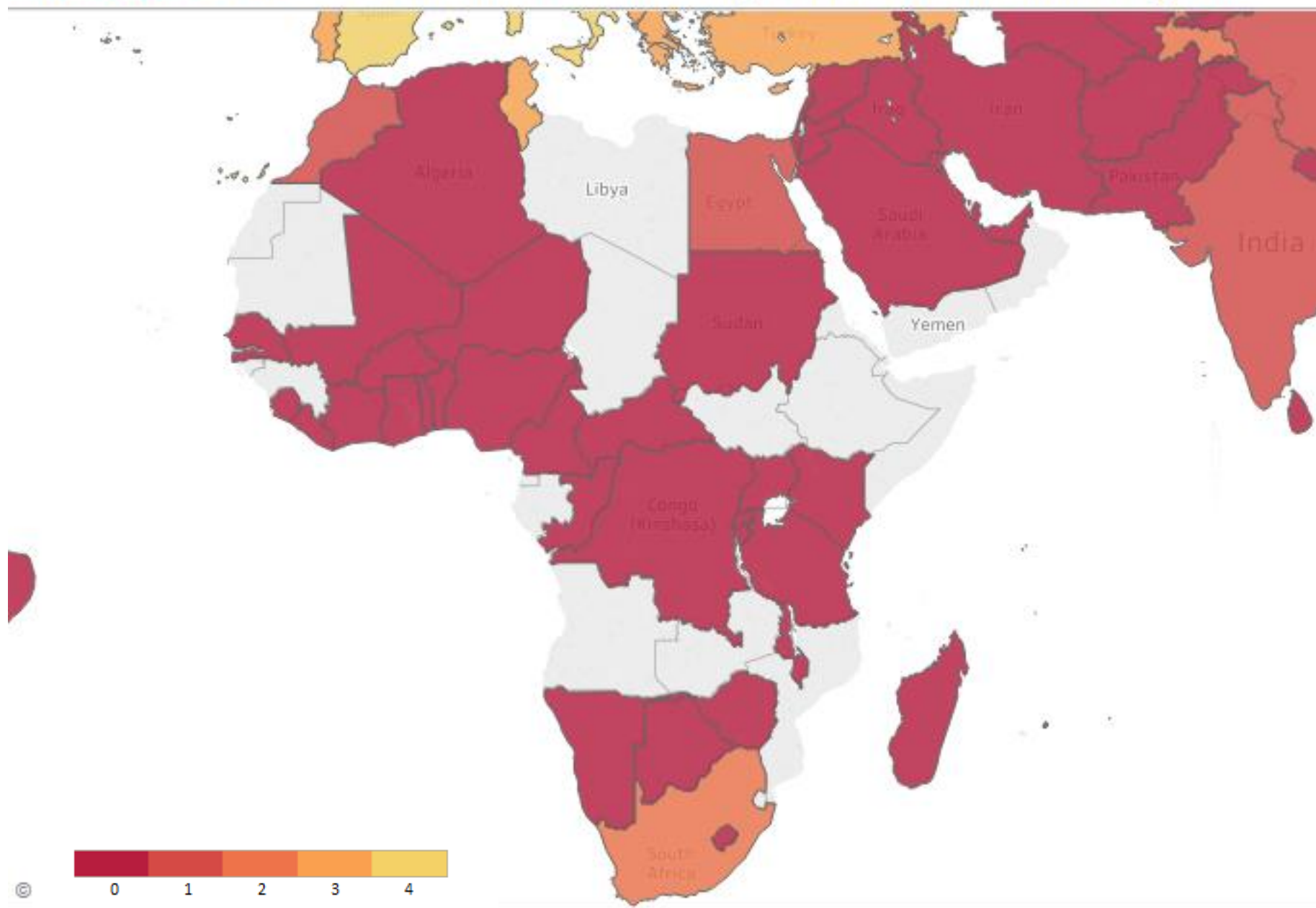
- 12 global performance targets with their corresponding
- 40 indicators agreed by UN member countries.
 - Only 12 indicators need specific ongoing data collection systems:
 - Has halved the proportion of vehicles traveling over the posted speed limits
 - Effectively enforces legislation on helmet
 - Reached almost 100% of the proportion of motorcycle rides correctly using their helmets
 - Implemented and effectively enforced legislation requiring the use of safety belts for all motor vehicle occupants
 - Implemented and effectively enforced legislation requiring the use of child-restraint systems meeting appropriate standards
 - Reached close to 100% proportion of all motor vehicle occupants using safety belts
 - Reached 100% proportion of all child motor vehicle occupants using standard child restraint systems
 - Implementing and effectively enforcing regulations on safety for child restraint systems sold
 - Implemented and effectively enforced on driving under the influence of alcohol and/or other psychoactive substances
 - Implemented and effectively enforce legislation restricting or prohibiting the use of mobile phone while driving
 - Implemented and effectively enforced regulation and audits of driving time and rest periods for professional drivers
 - Achieve national targets of the time interval between a crash resulting in serious injury and the provision of first professional emergency care

Why to collect it — If you did not have strong reasons you would not be here...

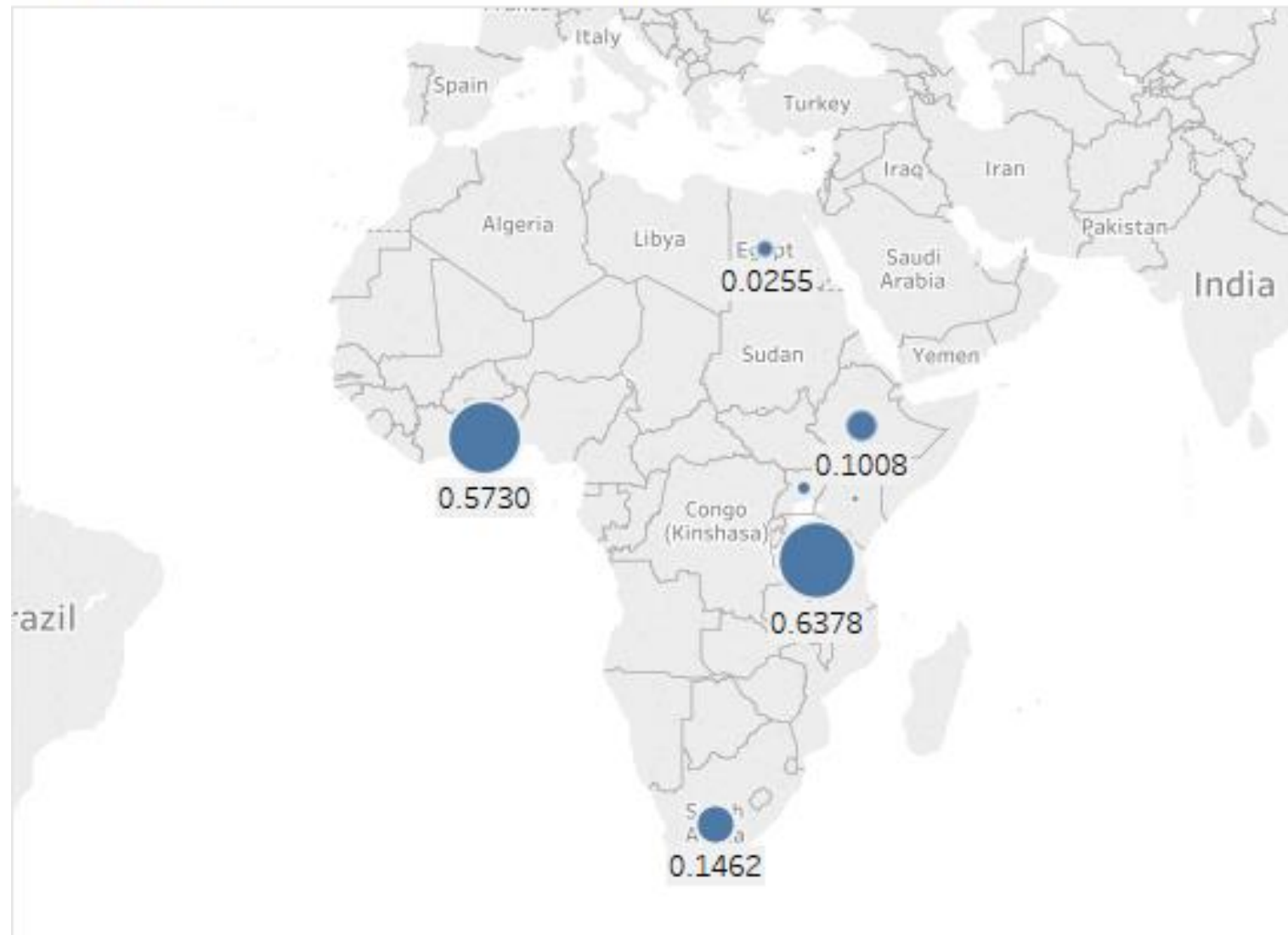
A few examples on needed/available data



Indicator 2: Total UN Conventions on Regulations on Vehicles Signed



Indicators 3 and 4: % of Star Ratings ≥ 3 on divided road carrying 20,000 vehicles a day, Vehicles



Where to collect it from

Data sources



Suggested plan

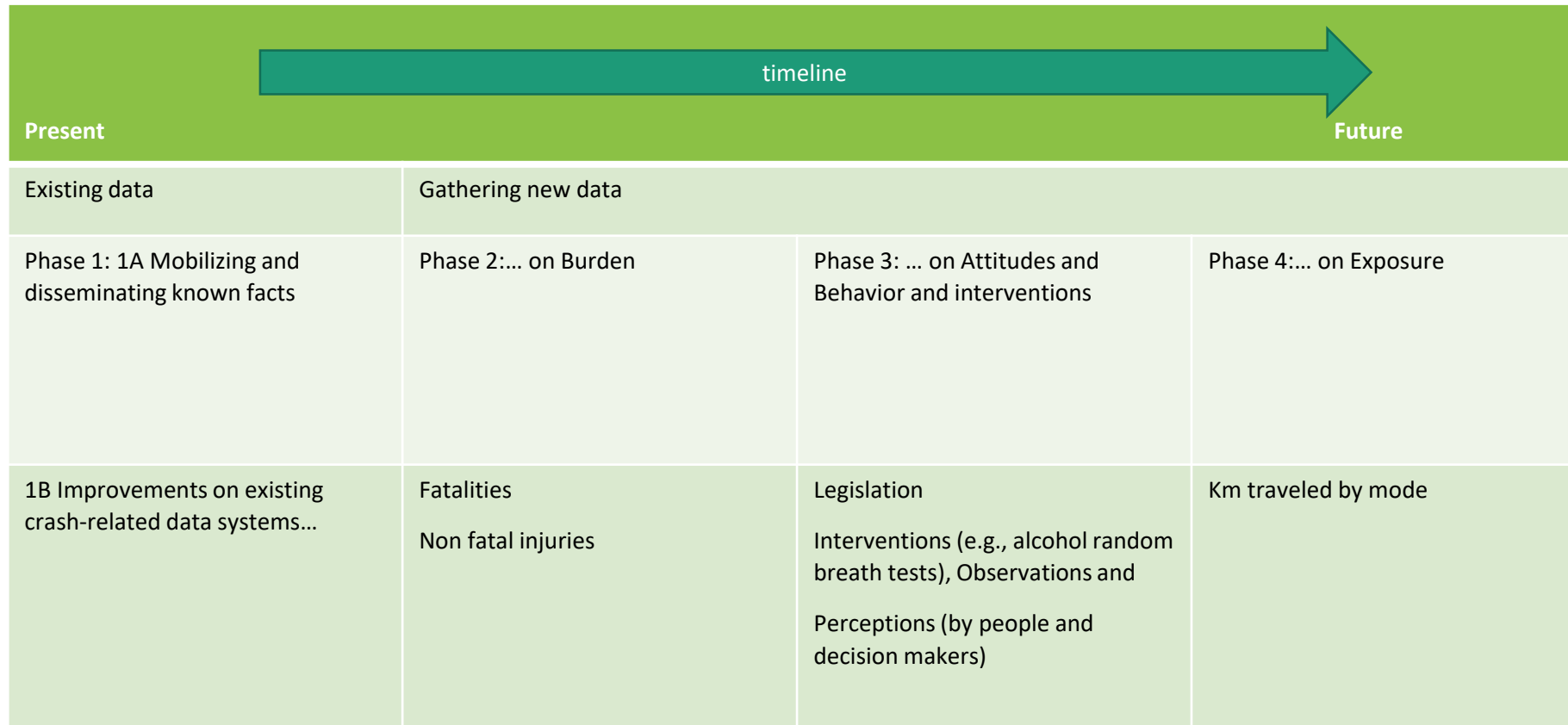
Review your own countries' reviews

Participate in WG to debate on priorities for Regional Observatory

Create a road map to success



How to move forward?



For each domain, set targets from improvement and monitoring progress

- Collaboration with input sources:
 - Indicator definers
 - Data collectors
- Collaboration in defining still missing data sources
- Guidance on priorities for regional observatories' priority setting

Example of quality check evolution: Number of deaths

Country/year	2017	2019	2021
A	OK	OK	OK
B	Undereporting 25%	Undereporting 12%	OK
C	Lacks vital reg. Systems	Lacks vital reg. systems	Underreporting 40%
D	Undereporting 5%	OK	OK
E	Lacks vital reg. systems	Undereporting 25%	Undereporting 5%

Where to collect it from

The Data sources



Data sources

The origin

- Crash Records (when crashes happen)
- Individuals, Driver, Vehicle registration systems (census)
- Road inventories (census)
- Health care sector data (Emergency, hospitalization -when events happen)
- Insurance sector (when events happen)
- Road user behavioral data (random samples of either observational or self-reported behavior repeated studies)

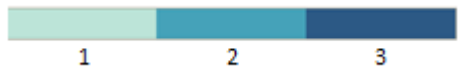
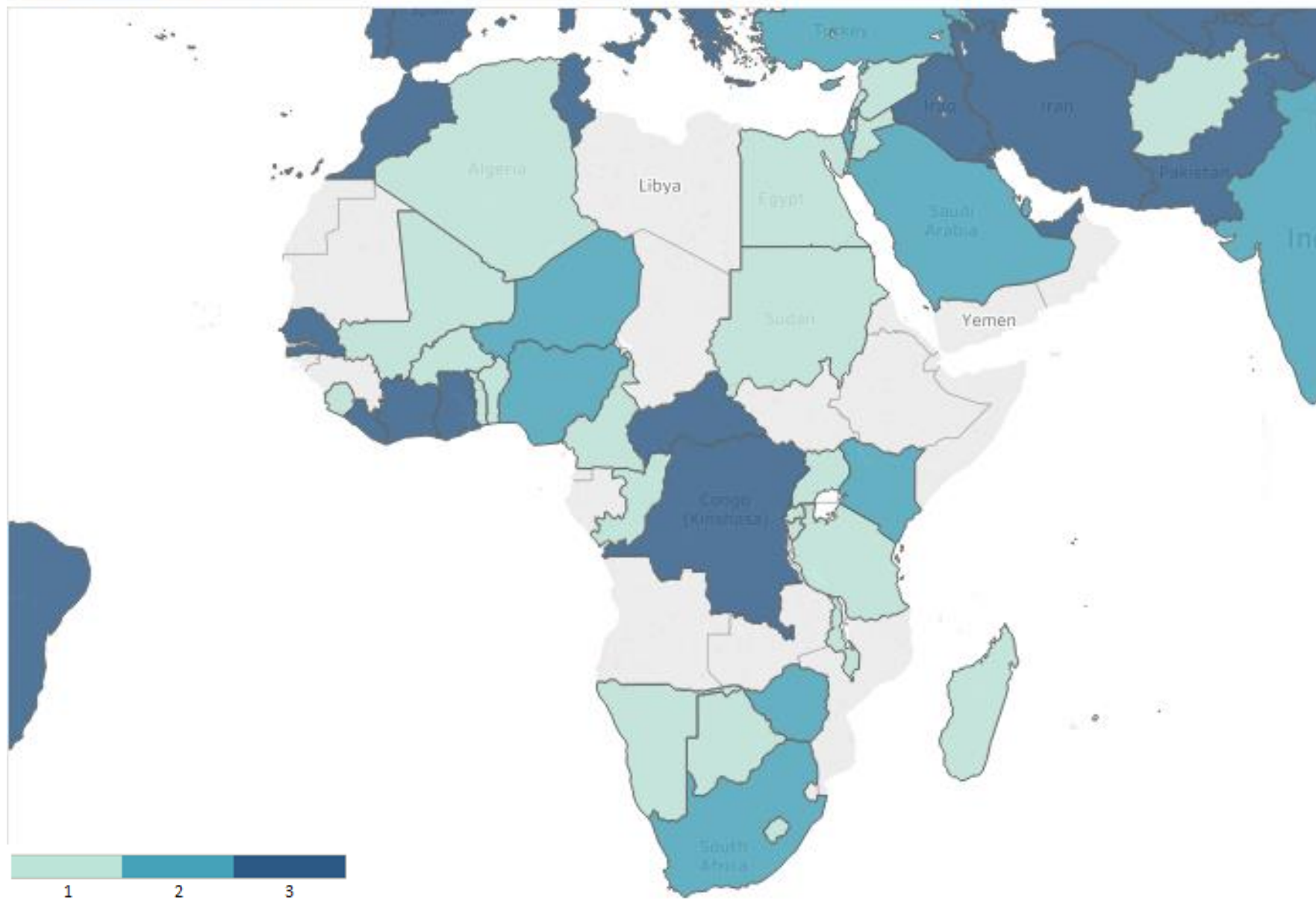
Their characteristics

- Universal population coverage vs. Selection bias
- Ongoing vs. Repeated vs. Ad hoc
- Consistency over time in coding schemes
- Administrative vs. research

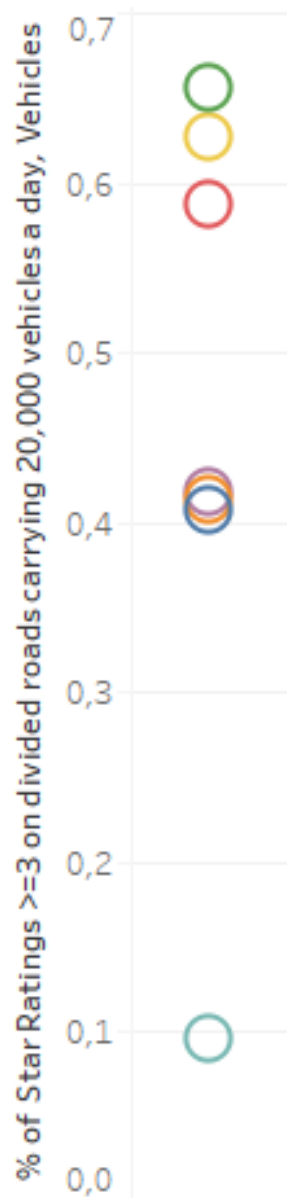
Thanks



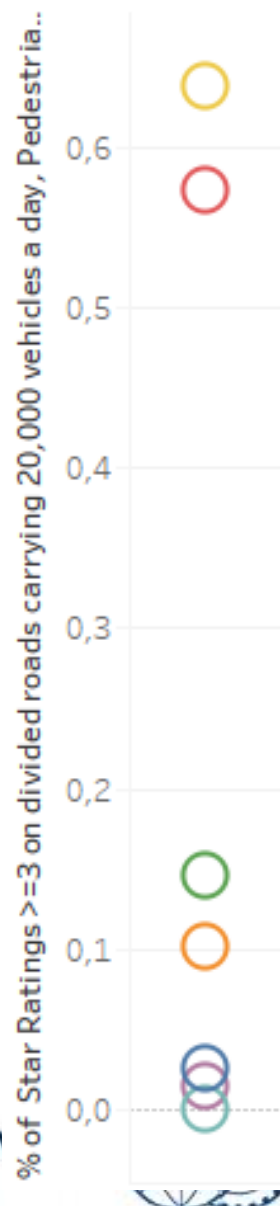
Indicator 2: Total Signed UN Conventions on Roads and Signals



Indicators 3 and 4 (IRAP)



Comparison between countries not recommended as road network selection varies



Thanks

