



Good practices, national and regional observatories on road safety
Road Safety Information Systems
Road Safety Management in the Arab countries

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Outline

Traditional approach

- Crash characteristics among the dead
 - Counting the dead
- (Selected) general population performance indicators
 - E.g., safety belt use; alcohol among drivers
- Characterizing non fatal victims

Analyses Paralyse

Approach needed in 2018

1. What is needed?

Implement Safety legislation

For people

For infrastructure

For vehicles

Initiate enforcement

2. Can we measure progress in process (e.g., enforcement) and outcomes (fatalities, non fatalities)?

Task 1. What is needed?

We have enough information on what is implemented and what not (and where)

From publicly available data sources. Besides WHO's country profiles, there are data from more than 20 other references (WEF, ESRA, UNECE, GBD, WB,...)

e.g.,

- FIA country profiles –to be released Dec 2018
Up to 225 items
- Similar to UNECE's SafeFITs, or IRF's dashboard
- ESCWA's own survey
- New WHO's global status report to be released on December 7th, 2018

NOTES:

1. Data used for this document is most recently available data that has been reported to international organizations. Actual situation may have changed since date of data collection.
2. Some variables may not have data as they are either not reported or are undergoing data collection and reporting.

Item	Ref	Metric	Data (2015)
Health Related Burden of Crashes			
1	A	Life expectancy (years)	74.1
2	A	Health Adjusted Life Expectancy (years)	65
3	C	Do road injuries rank in top 10 causes of death?	Yes
4	C	Do road injuries rank in top ten causes of premature death?	Yes
5	C	Do road injuries rank in top ten causes of disability?	No
6	C	Do road injuries rank in top ten as cause of death and disability combined?	Yes
7	D	Number of road fatalities reported by country	768
8	D	WHO trend graph	
9	D	% road fatalities - users/passengers of 4-wheelers (as per country reports)	64.3
10	D	% road fatalities - users/passengers of 2-3 wheelers (as per country reports)	0
11	D	% road fatalities - cyclists (as per country reports)	0
12	D	% road fatalities - pedestrians (as per country reports)	35.7
13	D	% road fatalities - other & unspecified (as per country reports)	0
14	D	WHO (estimated) number (and 95% confidence range) of road fatalities	1913 (1 633-2 193)
15	D	WHO classification for road and type of restriction (* 1=countries with good death registration data; 2=Countries with other sources of cause of death registration; 3=countries with population less than 150 000; 4=countries without eligible death registration data)	4*
16	A	IHVE reported road traffic mortality rate (per 100,000 population)	26.3
17	I	IHVE's reported change in road fatality rate between 2010 - 2015 (%)	N/A
18		Decrease in pedestrian and cyclist deaths and serious injuries	N/A
19	D	Estimated road traffic crash victims with permanent disability (%)	13.5
20		Country reporting to other RS observatories? (CARE/ERSO/OISEV/RTAD)	N/A
21	H	Cited in FIA report as a particularly affected country	No
22	B	% road users concerned about road accidents	N/A
23	B	Self-reported % who have been in a traffic accident over past 3 months as car drivers	N/A
24	B	Self-reported % who have been in a traffic accident over past 3 months as car passengers	N/A
25	B	Self-reported % who have been in a traffic accident over past 3 months as cyclist	N/A
26	B	Self-reported % who have been in a traffic accident over past 3 months as motorcyclist (50-125 cc)	N/A
27	B	Self-reported % who have been in a traffic accident over past 3 months while walking	N/A
Crash/Injury Reduction Interventions in Place			
Pillar I: Road Safety Management			
28	D	Lead agency present	Yes
29	D	Lead agency funded	No
30	D	Function includes coordination	Yes
31	D	Function includes legislation	Yes
32	D	Function includes monitoring and evaluation	Yes
33	D	National road safety strategy present?	Yes
34	D	Road safety strategy funded?	Partially

But ...what else is needed?

<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>

Examples of a few indicators for these 12 targets approved in 2018:

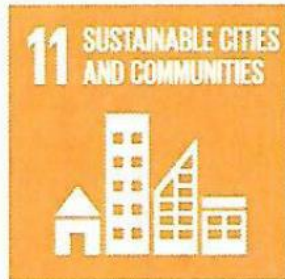
- Halve the proportion of vehicles traveling over the posted speed limits
- Effectively enforced legislation on helmet
- Reached almost 100% of the proportion of motorcycle rides correctly using their helmets
- Implemented and effectively enforced legislation requiring the use of safety belts for all 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

Task 2. Can we measure progress?



SDG GOAL 3: Ensure healthy lives and promote well-being for all at all ages

TARGET 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents



SDG GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable

TARGET 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

On SDG 3.6 (2014 data in 2015 WHO report)



	Number of countries	Total population (000s)	Total reported road deaths by countries	Total WHO road death counts
World (total)	194	7 312 528	622 268	1 207 617
Africa	49	1 001 415	63 830	242 772
Americas	35	986 707	127 645	138 361
Asia	30	4 112 685	322 066	694 817
Europe	43	733 385	56 220	59 406
North Africa and Western Asia	23	439 973	50 713	69 157
Oceania	14	38 363	1 794	3 004



On SDG 3.6 in ESCWA region

	Number of countries	Total population (000s)	Total reported road deaths by countries	Total WHO road death counts
World (total)	194	7 312 528	622 268	1 207 617
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Asia	30	4 112 685	322 066	694 817
Europe	43	733 385	56 220	59 406
North Africa and Western Asia	23	439 973	50 713	69 157
In particular, ESCWA members	18		41 465	60 967
Oceania	14	38 363	1 794	3 004

31% difference

What to do when you are missing one of every three road fatal victims?

One of two choices

1) assume underreporting is random and continue policy making using police-derived data and its analysis

2) investigate the nature of underreporting

- Likely, more rural areas, more vulnerable users, single crashes, etc....
- Promote improvements in population coverage



(a small parentheses) Explaining the differences in fatality counts

Is there a civil (vital) registration system in place?

- More than 78 countries in the world have no operational civil registration systems reporting to WHO
 - 11 of them in ESCWA region
- (temporary) solution: mathematical model for all causes of death

Even when there is a civil registration system in place

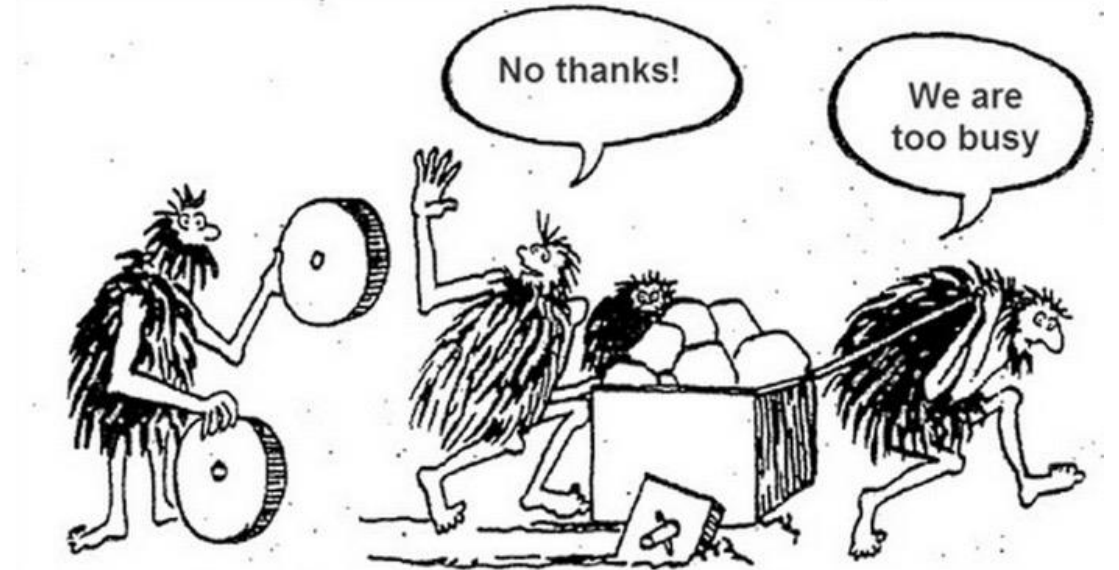
- Some countries do not cross-check their data
 - E.g., Spain. 2012 was the first year when traffic authorities established a protocol to periodically validate road deaths against civil registration system

How can we improve measuring progress?

- Developing/improving Data systems
 - Including, but not limited to crash-related data systems
 - Vehicle registration systems
 - Road inventory systems
 - Driver license registration systems
 - Civil and vital registration systems
 - Sanctions and infractions registrations systems

- Standardizing Variable definition (and value definition)
 - Mostly settled in international agreements (e.g., UNECE, ITF and EuroStat glossary)
 - Ongoing work on some others, including performance indicators

- Setting Targets and indicators



How to improve data collection?



Regional Road Safety Information Systems (a.k.a. Regional Observatories*) can be the tool to facilitate country level improvements and speeding up the convergence into world-wide common standards

- Countries should be encouraged to systematically and over time build the minimum set of indicators for data capturing and analysis into their road safety information systems.
- This comprehensive set of indicators should cover the whole sector and use that information to improve safety and more transparent and rational decision making.
- There exist software/data collection templates that can be easily (and economically adapted) to different country environments
- There exist hardware to facilitate local data collection
- Various relevant organisations support the initiatives on to establish a road safety observatory
- By bringing interested parties together, regional observatories accelerate capacity building, system implementation, and intervention adoption
- There are enough examples of working observatories from which to build on....

What are we at FIA doing on observatories?

We created a working group together with WB and ITF and formalized it

Since late 2016 we have been working on:

- Europe (CARE/ERSO) –participated in definition of new 2030 indicators and targets
- Latin America (OISEVI)
- Africa (ARSO)
- ESCWA
- South East Asia



IRTAD

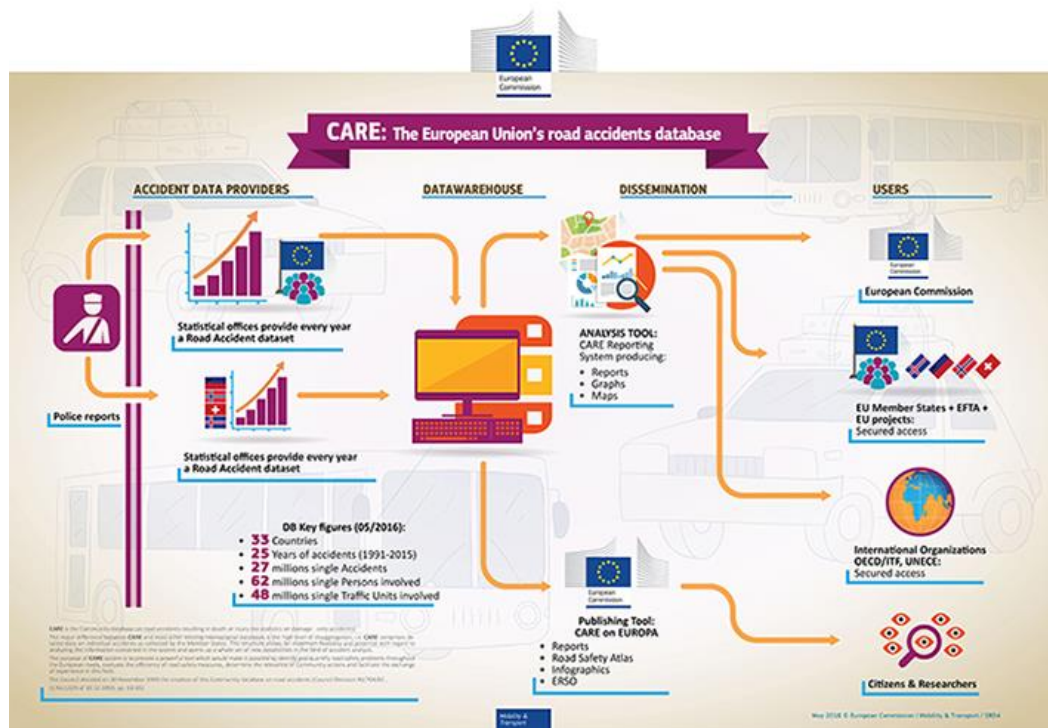


<https://www.itf-oecd.org/IRTAD>

- Established in 1988
- Working group within International Transportation Forum (within OECD)
- Currently 30 countries*, government and non-government organizations pay a yearly membership to be part of it
- So far, mostly crash-related data
- Collects aggregated data (tabulated data) and publishes it after a validation process

*From ESCWA, only Morocco

CARE



- Established in 1993* to gather crash data in European countries
- Collects individual-level data
 - Much greater analytical possibilities
- 33 EU governments report the data of crashes leading to death and/or injuries
- In 2018 our team participated in discussions to select targets and indicators for 2030

https://ec.europa.eu/transport/road_safety/specialist/statistics_en

*European Council Decision 93/704/EC of November 30 1993
"on the creation of a Community database on road accidents"

ERSO



Over time, additional EU-funded research projects built on complementary aspects: in-depth crash investigation (e.g., DAKOTA), attitudes and self-reported behaviour (SARTRE now ESRA), depository of best practices... and this was called ERSO

SafetyNet

SafetyNet is an Integrated Project funded by DG-TREN of the European Commission. The objective of the project is to build the framework of a European Road Safety Observatory, which will be the primary focus for road safety data and knowledge, as specified in the Road Safety Action Plan 2003. The Observatory will support all aspects of road and vehicle safety policy development at European and Member State levels. It will make new proposals for common European approaches in several areas including exposure data and Safety Performance Indicators. It will extend the CARE database to incorporate the new EU Member States and will develop new fatal and in-depth accident causation databases. It will also develop new statistical methods that can be used to analyse combined macroscopic and other data.

Upon completion of the project it is expected the Observatory website will be incorporated within the Commission website.

22 institutes from 17 countries cooperate in the SafetyNet project. This project lasts for four and a half years and will be completed in 2008.

[Click here](#) to download a concise overview of the project.

The following table gives a brief overview of and links to relevant output of SafetyNet.

	Theory	Data	Guidelines and manuals	Other results
Macroscopic	<ul style="list-style-type: none">◆ Risk exposure data◆ State of the art report◆ Risk Exposure Data Common Framework◆ Safety Performance Indicators◆ Safety Performance Indicators Theory	<ul style="list-style-type: none">◆ Care Accident data◆ Annual Statistical Report 2007◆ Main Figures◆ Children (Aged <16)◆ Young People (Aged 16-24)◆ The Elderly (Aged >64)◆ Pedestrians◆ Bicycles◆ Motorcycles and Mopeds◆ Car Occupants◆ Heavy Goods Vehicles & Buses◆ Motorways◆ Junctions◆ Urban Areas	<ul style="list-style-type: none">◆ Safety Performance Indicators◆ SPI Manual	<ul style="list-style-type: none">◆ Care Accident data◆ First classification of the EU member states on Risk and Exposure Data◆ Safety Performance Indicators◆ Road Safety Performance Indicators Country Comparisons

ERSO's name will eventually disappear after full integration into a broader CARE framework

OISEVI



Website currently under remodelling

- Established in 2012
 - Preceded by many years of bilateral collaborative projects and a 2008 political resolution by SEGIB
- 19 Latin American countries + Spain. Initially established as an independent organization headed by Traffic authorities of member countries
- Since Nov 15, 2018, part of a road safety integral program within SEGIB under heads of state
- Collects aggregated data
- Acts as forum for policy discussion
- Facilitated twinning projects, training from IRTAD, funding of data collection on attitudes and self-reported behaviour (ESRA), etc

ARSO

No website yet



- Established in Nov 2018
 - After several political commitments (AU level) and three workshops during 2018: February (Senegal), July (Nigeria) and November (Morocco)
 - Agreed on: by Laws, crash-related variables to be collected, and work plan 2019-2021
- Seeking hosting by African Union
- Morocco, Nigeria, Kenya, Benin, Cameroon, Uganda and South Africa in Steering committee already, others to join. 23 others have expressed interest
- Initially will collect aggregated data but wants to collect it disaggregated
- Includes program to improve civil and vital registration systems together with WHO

Other regional efforts

Safer Africa

- 3 year EU funding ending in 2019. Multiple goals.
- On data,
 - Surveyed 29 African countries* to assess data collection practices and issued recommendations
 - Five ongoing pilots**
 - Created a depository <http://www.africanroadsafetyobservatory.org/>

*None ESCWA except Mauritania and Libya

** None ESCWA

ESRA (www.esranet.eu)—attitudes and self-reported behaviour (e.g., perception of risk, acceptance of road safety measures)

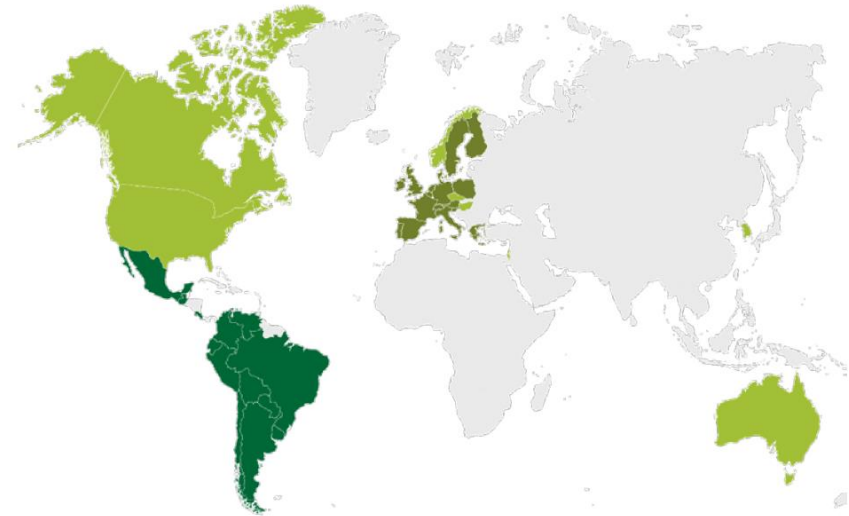
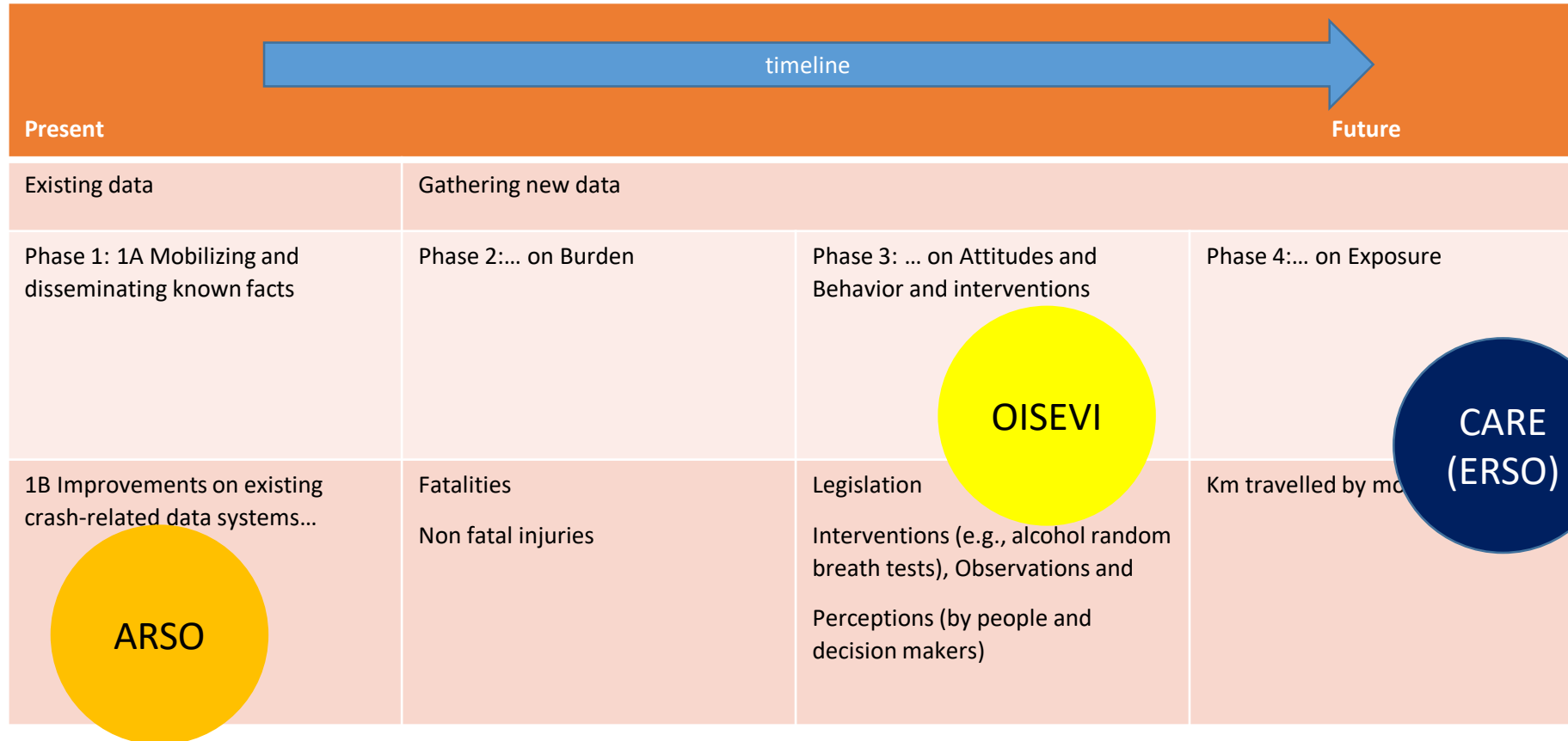


Figure 1: Geographical coverage and evolution of the ESRA1 survey

Note: Olive colored countries participated in wave 1 – 2015; light green colored countries in wave 2 – 2016; and dark green countries in wave 3 – 2017.

- In few weeks, Egypt and Morocco will be added. Others are welcomed to join

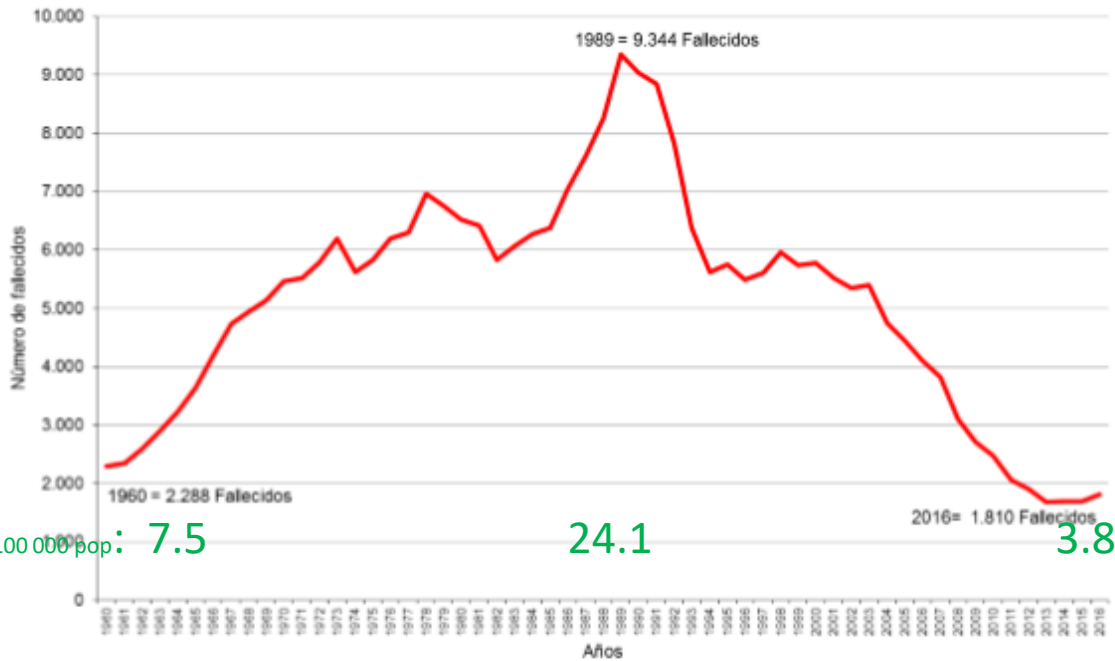
How to move forward?



Time units can be decades...or years, if we use what we have learnt during this time.
E.g., ARSO has achieved in 1 year what OISEVI took at least 5 years to achieve

Spain, a late but successful comer to road safety

Road traffic deaths, 1960-2016



Road Safety Strategy 2011-2020; indicators and values

Indicadores	Cifra basal 2009	Cifra 2015	Cifra 2016	Cifra objetivo 2020
1. Bajar de la tasa de fallecidos de 37 por millón de habitantes	59	36	39	Inferior a 37
2. Reducción del número de heridos graves en un 35% ²	13.023	9.495	9.755	9.050
3. Cero niños fallecidos sin sistema de retención infantil ³	12	5	3	0
4. 25% menos de conductores de 18 a 24 años fallecidos y heridos graves en fin de semana	730	353	381	548
5. 10% menos de conductores fallecidos mayores de 64 años	203	200	206	183
6. 30% reducción de fallecidos por atropello	459	306	386	321
7. 1 millón de ciclistas más sin que se incremente su tasa de mortalidad	1,2	1,2	1,4	1,2
8. Cero fallecidos en turismos en zona urbana	101	61	80	0
9. 20% menos de fallecidos y heridos graves usuarios de motocicleta	3.473	2.928	3.024	2.778
10. 30% menos de fallecidos por salida de vía en carretera convencional	520	285	270	364
11. 30% menos de fallecidos en itinere	170	101	No disponible	119
12. Bajar del 1% los positivos en aire espirado en los controles preventivos aleatorios. DRUID, punto de corte 0,05 mg/l	6,7%	1,7%	No disponible	Inferior al 1%
13. Reducir en 50% el % de vehículos ligeros que superan el límite de velocidad en más de 20 km/hora	12,3% (autopista) 6,9% (autovía) 15,8% (conv.90) 18,4% (conv.100)	No disponible. Estudio periódico	No disponible. Estudio periódico	6,2% (autopista) 3,5% (autovía) 7,9% (conv.90) 8,2% (conv.100)

Additional evidence that together we can do it better and faster

Journal of European Public Policy, 2013
http://dx.doi.org/10.1080/13501763.2013.829580



Could being in the European Union save lives? An econometric analysis of the Common Road Safety Policy for the EU-27

José I. Castillo-Manzano, Mercedes Castro-Nuño and Xavier Fageda

We included the *Europeanization* variable (the number of years that a country has been a member of the EU) and our main finding is that it is negative and statistically significant, which means that a positive influence on domestic road safety emerges after accession to the EU. When a new member state completes accession, road traffic issues gain in importance in national policy, and the country gains access to other members' successful experiences and take advantage of EU legislation, EU funding and the motivation provided by contributing to EU shared targets.

The cumulative nature of this variable also enables us to conclude that this process of positive imitation between member countries is not limited to the 2001 white paper and the third ERSAP, but that its significance could be understood as indirect empirical evidence of the effectiveness of all EU road safety policy executed to date.

Compared to the difficulties that this entails for strictly economic variables, such as unemployment and inflation, this should not be so complex for traffic safety policy *a priori*, thanks to all the experiences and recommendations (compulsory seat-belt use, reductions in limits on blood alcohol content and improved communication and advertising strategies, among many others), all of which generally have affordable implementation costs. Furthermore, these efforts by states to reduce this gap in road safety seem to receive solid social support, as according to the results of the Eurobarometer survey (EC 2010a) European citizens agree with the efforts made in this field in recent years and even call for governments to do more to combat the problem.

Transport Policy 35 (2014) 229–240



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Transport Policy

journal homepage: www.elsevier.com/locate/tranpol

The trend towards convergence in road accident fatality rates in Europe: The contributions of non-economic variables

José I. Castillo-Manzano ^{a,*}, Mercedes Castro-Nuño ^a, Diego J. Pedregal ^b

Our findings show that the Europeanization process seems to lead not only to improvements in individual road accident rates for each Member State (in the sense that the longer the State has been a member of the EU, the more negative the fatality rates of change are), but a greater acceleration in the convergence of all EU countries at the time that the Baltic countries joined in 2004.

Despite the fact that they joined at a later stage, the major efforts that were made even before they joined, both on an individual basis (e.g., by drawing up National Road Safety Plans, as was the case in Latvia, with goals for reductions in the death rate that were even more ambitious than the 3rd ERSAP itself), and coordinated by the EU (through e.g., the BALTRIS Programme 2007–2013 with transnational cooperation with the safety leader Sweden; Baltris, 2011), are a true example of European convergence on road safety.



For each domain, set targets from improvement and monitoring progress

Observatories can

- Provide guidance on priorities for regional priority setting
- Facilitate collaboration in defining still missing data sources and collecting data from most appropriate source
- Facilitate adoption of:
 - Indicator definers
 - Data collectors

Example of quality check evolution: Number of deaths

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



Summing it up

- No need to wait to begin action
 - Embrace, adopt, enforce recommendations
- Embrace performance and outcome indicators. Embrace/modify targets
- Invest in data system improvements according to existing (and often free of charge systems)
 - Pay attention to link to civil and vital registration systems to avoid bias in analysis
- Take advantage of the errors from others in the past –you can jumpstart: read, ask. Glad to share!



FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Thanks!

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