



Improving road crash data collection systems and data sharing in the EuroMed region

Geneva, 26-29 September 2023

**The Global Forum for Road Traffic Safety (87th session)
(WP.1)**

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Content of the presentation

1 About EuroMed TSP and objectives

2 Objectives of the road safety data activity

3 Results: Diagnosis

4 Results: A common definitions dataset

5 Results: Understanding differences & bridging them

6 EuroMed countries pilot studies: Morocco & Tunisia

7 Conclusions





EU funded European Neighbourhood Instrument (ENI) – South
Creation of **integrated transport** in Mediterranean

Duration, January 2017 to December 2022





Regulatory convergence and harmonization

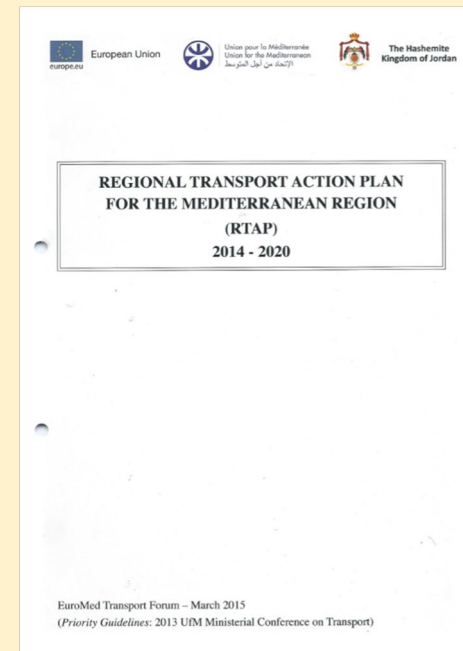
Support Partner Countries implement the RTAP 2014-2020 on four actions:

Action 8: Efficient land transport systems;

Action 9: International land transport haulage;

Action 10: Road safety;

Action 11: Urban transport





Action 10 Road Safety & EuroMed TSP

- ❖ Pursue efforts for **reliable data** collection system to facilitate **data comparison**
- ❖ **Share national data at regional level** similarly to ERSO and CARE



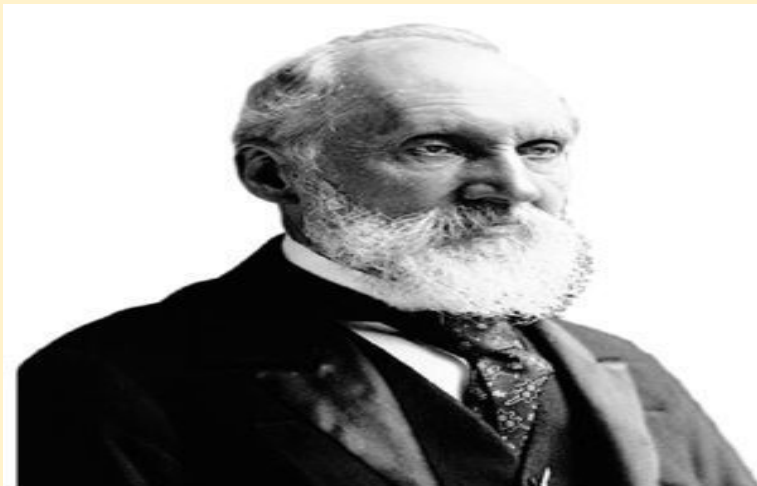


- ❖ Data quality: under-reporting, lack of common definitions
- ❖ Difference between country reported / WHO estimated fatalities

Country	Country-reported fatalities*	WHO-estimated fatalities	Difference	Difference in %
Egypt	8211	9287	1076	13%
Lebanon	576	1090	514	89%
Tunisia	1443	2595	1152	80%
Morocco	3785	6917	3132	83%
Algeria**	4540	9337	4797	106%
Jordan	750	2306	1556	207%

* All countries use the definition of fatalities occurring within 30 days of the crash, except Egypt (killed at the accident scene) and Lebanon (fatality in an unlimited period following the crash)

** Data not available for 2016 in Global Status Report on Road Safety 2018 (GSRRS4). The latest data available are for 2013 from Global Status Report on Road Safety 2015 (GSRRS3)



To measure
is to know.
If you can not
measure it,
you can not
improve it.

– Lord Kelvin

SUSTAINABLE DEVELOPMENT GOALS



Target 3.6 – to halve the number of deaths and injuries from road traffic accidents – countries are increasingly required to report accurate national traffic fatality data.



- ❖ **Identify** current situation (diagnosis)
- ❖ Present **best practices** and tools (national, European, international)
- ❖ **Understand discrepancies** and bridge them
- ❖ Strengthen the capacities





- ❖ Review international experience and good practice
- ❖ Share experiences on methods and quality issues
- ❖ Enhance common understanding on discrepancies
- ❖ Coordinate efforts & avoid duplication

.....**More benefits for countries!**



Interagency meeting in Marrakech 12 October 2017





❖ Diagnostic missions in EuroMed partner countries 2017-2018

ALGERIA, 18-20 Nov 2017



EGYPT, 2-5 October 2017

Meeting with Minister of Transport



JORDAN, 22-25 April 2018



LEBANON, 13-15 September 2017



MOROCCO, 9-13 October 2017



TUNISIA, 21-23 November 2017



ISRAEL and PALESTINE not included -> well performing and credible data

WHO estimated rate per 100 000 population (2016) **ISRAEL: 4.2, PALESTINE (West Bank and Gaza Strip): 5.3**



- ❖ Questionnaire (September 2017)
- ❖ Country missions (2017-2018)
- ❖ Recommendations report (December 2018)

EuroMed Transport
SUPPORT PROJECT

Project funded by the European Union

Activity 1A.2.6b

TA on setting up road safety reliable, harmonized and comparable data collection system and sharing at regional level

QUESTIONNAIRE

September 2017

ALGERIA, 18-20 July 2017



LEBANON, 13-15 September 2017



EGYPT, 2-5 October 2017
Meeting with Minister of Transport



MOROCCO, 9-13 October 2017



JORDAN, 22-25 April 2018



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EuroMed Transport
SUPPORT PROJECT

Setting up road safety reliable, harmonized and comparable data systems and sharing at regional level

Final Report

On existing best practices, methods and tools for collection and processing reliable data, Diagnosis of the current situation in EuroMed Partner countries and Recommendations on the way forward

Brussels, December 2018



EuroMed TSP

Diagnosis report - country recommendations to improve road safety data

Joint EuroMed / WHO publication

International Good practice report

EuroMed leaflet - A common dataset with harmonized definitions in the region

TA on applying international definitions and standards

TA on bridging the difference with WHO

Facilitate contact and cooperation with international organisations

Partner countries

Provide copy of National Data Collection form and definitions

Establish cooperation between Police, Transport and Health / VRD sector

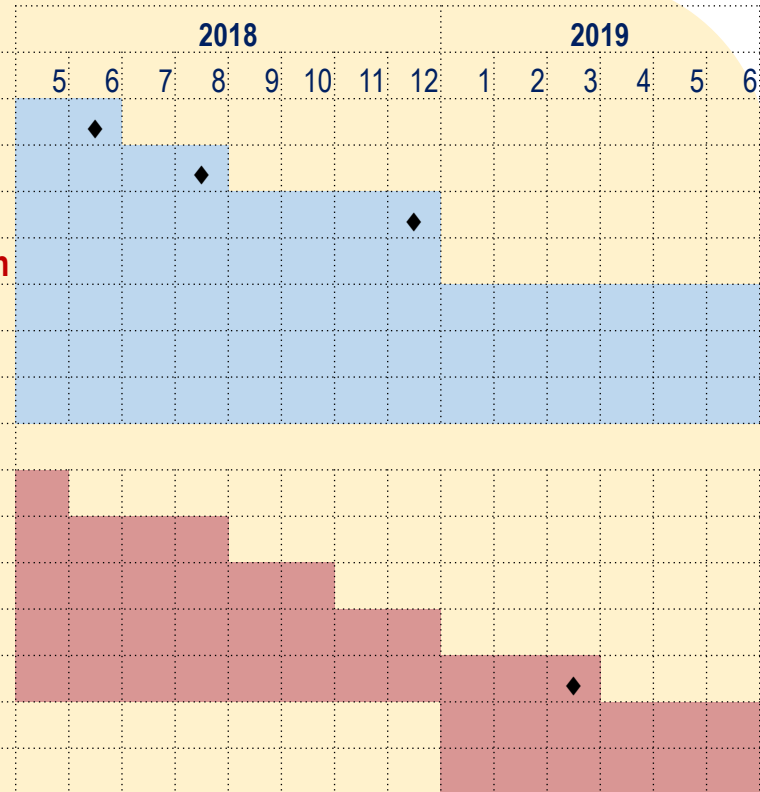
Understand VRD quality issues and set objective (Group 2 or Group 1)

Adopt 30 days definition and improve follow-up procedures

Implementation of study on under-reporting

Apply international definitions as per EuroMed recommendations

Set up of national road safety observatory

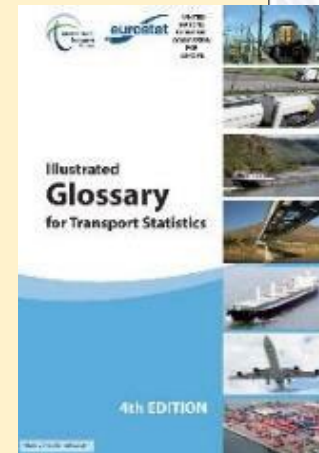


◆ Report





- ❖ From the 'diagnosis' of the road crash data in the EuroMed region (2018) it was found that there is considerable **variability and uncertainty regarding the basic definitions (accident, fatality etc.)**.
- ❖ The EuroMed TSP recommended a relatively small but highly useful **set of variables to be harmonised** with international standards.
- ❖ This dataset is drawn from a synthesis of UNECE, CADaS and WHO recommendations, adjusted to the needs and potential of the countries.





- UNECE:
 - 735 definitions
 - Vehicles
 - Road types
 - Accidents
- WHO:
 - 38 basic variables
 - 16 additional variables
- CADaS:
 - 40 high importance variables
 - 37 low importance variables

	UNECE Basic definitions	CADAS High Priority variables	WHO Minimum Data elements	EuroMed Selection	
				Basic	Additional
ACCIDENT (Accident ID)					
Date		•	•	✓	
Time		•	•	✓	
Municipality & region			•		
Crash location (GPS)			•		✓
NUTS		•			
LAU		•			
Weather		•	•	✓	
Lighting		•	•	✓	
Crash type*	•		•	✓	
Accident with pedestrian*		•			
Accident with parked vehicle*		•			
Single vehicle accident*	•	•			
At least two vehicles - no turning*	•	•			
At least two vehicles - turning or crossing*	•	•			
Hit and Run		•			✓
Impact type			•		✓

Synthesis EuroMed: 24 variables (15 priority and 9 additional)
according to the needs and capacities of the countries



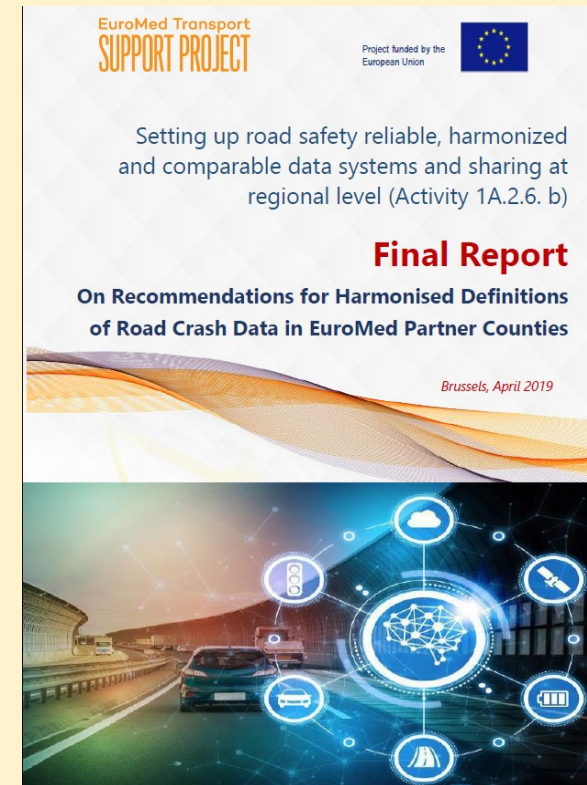
Variable	Basic	Additional	Variable definition	Suggested values*	
ACCIDENT (Accident ID)	A1. Date	✓		The date on which the crash occurred	XDDMMYYYY (weekday, day, month, year)
	A2. Time	✓		The (local) time of the day, when the crash occurred	hhmm
	A3. Crash type	✓		The crash type is characterized by the first injury or damage-producing event of the crash	01: With pedestrian, 02: With parked vehicle, 03: With fixed obstacle, 04: Non-fixed obstacle, 05: Animal, 06: Single vehicle crash/non-collision, 07: Crash with two or more vehicle, 08: Other crashes.
	A4. Weather	✓		Prevailing atmospheric conditions at the crash location, at the time of the crash	01: Clear, 02: Rain, 03: Snow, 04: Fog, mist or smoke, 05: Sleet, hail, 06: Severe winds, 08: Other weather condition, 99: Unknown weather condition.
	A5. Lighting conditions	✓		The level of natural and artificial light at the crash location, at the time of the crash	01: Daylight, 02: Twilight, 03: Darkness, 04: Dark with street lights unit, 05: Dark with street light lit, 99: Unknown.
	A6. Crash location		✓	The location at which the crash occurred	Character string, to support latitude/longitude coordinates, linear referencing method, or link node system
	A7. Impact type		✓	Indicates the manner in which the road motor vehicles involved initially collided with each other (first impact).	01: No impact between motor vehicle, 02: Rear end impact, 03: Head on impact, 04: Angle impact-same direction, 05: Angle impact-opposite direction, 06: Angle impact- right angle, 07: Angle impact-direction not specified, 08: Side by side impact – same direction, 09: Side by side impact – opposite direction, 10: Rear to side impact, 11: Rear to rear impact.
ROAD (Road ID)	R1-A. Motorway	✓		Information on whether the accident occurred on a motorway	01: Yes, 02: No, 99: Unknown
	R1-B. Type of road			Describes the type of road, whether the road has two directions of travel, and whether the carriageway is physically divided. In case of junction, record the priority vehicle road	01: Motorway/freeway, 02: Express road, 03: Urban road, two-way, 04: Urban road, one-way, 05: Road outside urban area, 06: Restricted road, 08: Other, 99: Unknown.
	R2. Area type	✓		It is indicated whether the accident occurred inside or outside an urban area.	01: Yes, 02: No, 99: Unknown
	R3. Junction	✓		If the accident occurred at a junction, this variable indicates whether the accident occurred at an at-grade junction or at an interchange and the type of junction / interchange	0: Not at junction, 01: Crossroad, 02: Roundabout, 03: T or staggered junction, 04: Multiple Junction, 05: Interchange, 06: Other, 07: At level crossing, 99: Unknown.
	R4. Road surface conditions	✓		The effect of the prevailing atmospheric conditions on the road surface at the accident scene	01: Dry, 02: Snow, frost, ice, slush, 03: Slippery, 04: Wet damp, 05: Flood, 06: Other, 99: Unknown.
V1. Vehicle type	✓		The type of vehicle involved in the crash	01: Bicycle, 02: Other non-motor vehicle, 03: Two/three-wheel motor vehicle, 04: Passenger car, 05: Bus/coach/trolley, 06: Light goods vehicle (<3.5t),	



Variable		Basic	Additional	Variable definition	Suggested values*
VEHICLE (Vehicle ID, Accident ID)	V2. Registration year	✓		The year when the motor vehicle was first registered. Not applicable for pedestrians or other non-motorized vehicles	07: Heavy goods vehicle (≥3.5 t), 08: Other motor vehicle, 99: Unknown, YYYY (registration year)
	V3. Hit and run		✓	Indicates whether the vehicle was recorded by the police at the crash location or left the accident scene right after the crash. Not applicable for pedestrian.	01: Not Hit & Run, 02: Hit & Run, 99: Unknown.
	U1. Date of birth	✓		The date of birth of the person involved in the crash.	ddmmyyyy (day, month, year)
PERSON (Person ID, Vehicle ID)	U2. Gender	✓		the gender of the person involved in the crash.	01: Male, 02: Female, 03: Unknown, 04: Driver, 05: Passenger, 06: Pedestrian, 07: Other, 99: Unknown.
	U3. Road User Type	✓		The role of each person at the time of the crash.	01: Driver, 02: Passenger, 03: Pedestrian, 04: Other, 99: Unknown.
	U4. Injury severity	✓		The injury severity level for a person involved in the crash.	01: Fatal injury (30 Days), 02: Serious/severe injury (24 hours hospitalisation), 03: Slight / minor injury, 04: No injury, 99: Unknown.
	U5. Driving license issue date		✓	The date of issue of the person's first driving licence, provisional or full, pertaining to the vehicle they were driving.	MMYYYY (month, year)
	U6. Alcohol use suspected		✓	Law enforcement officer suspects that person involved in the crash has consumed alcohol. Recording mandatory for all drivers of motorized vehicles.	01: No, 02: Yes, 03: Not applicable, 99: Unknown.
	U7. Drug use		✓	Indication of suspicion or evidence that person involved in the crash has used illicit drugs. Recording mandatory for all drivers of motorized vehicles	01: None, 02: Suspicion of drug use, 03: Evidence of drug use, 04: Not applicable, 99: Unknown.
	U8-A. Safety equipment – occupant restraints		✓	Describes the use of occupant restraints.	01: Seat-belt available, used, 02: Seat-belt available, not used, 03: Seat -belt not available, 04: Child restraint system available, used, 05: Child restraint system available, not used, 06: Child restraint system not available, 07: Not applicable, 08: Other restraints used.
	U8-B. Safety equipment – helmets		✓	Describes the use of helmet use by a motorcyclist or bicyclist.	01: Helmet worn, 02: Helmet not worn, 07: Not applicable, 99: Unknow.



- ❖ Harmonise **basic definitions (accident, road, casualty severity)**, with particular focus on the 30-days fatality definition and the systematic follow-up of crash casualties for 30 days.
- ❖ Estimation of the **degree of fatality under-reporting**, by means of stronger and more systematic **inter-sectoral cooperation** between the Police, the Health / VRD Sector, the Transport and Insurance Sectors etc.
- ❖ Followed by the harmonisation of other variables, with emphasis on the basic priority variables.





Country	Country-reported fatalities*	WHO-estimated fatalities	Difference	Difference in %
Egypt	8211	9287	1076	13%
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- ❖ Different definitions
 - ❖ Country reported fatalities : usually based on police data, with or without the international definition of “fatalities occurring within 30 days of the crash”
 - ❖ WHO estimated fatalities : based on Vital Registration Data (VRD), based on death certificates issued by hospitals or private doctors; no time limit for when death occurs from a road traffic injury.

- ❖ **Quality of Vital Registration Data (VRD)**
 - ❖ If VRD of a country are not “eligible”, WHO uses a **statistical model** to obtain an estimation of deaths in unlimited time from the traffic crash.



- WHO criteria for VRD quality:
 - **Group 1:** Countries with good VRD statistics (completeness for the year estimated at 80% or more, average completeness for the decade including the last year at 80% or more).
 - **Group 2:** Countries with other sources of information on causes of death (including recent studies submitted to WHO).
 - **Group 3:** Countries with a population of less than 150 000.
 - **Group 4:** Countries without eligible VRD.

	VRD statistics**			
	Reported VRD	Year	Completeness	Country classification group
Egypt	8211	2015	94%	1
Lebanon	-	-	-	4
Tunisia	298	2013	29%	4
Morocco	887	2014	29%	4
Algeria**	-	-	-	4
Jordan	669	2012	59%	4

Estimation method	Country
Group 1 Countries/areas with good death registration data	Argentina, Australia, Austria, Azerbaijan, Barbados, Belarus, Belgium, Belize, Brazil, Bulgaria, Canada, Chile, China (14, 15), Colombia, Costa Rica, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Fiji, Finland, France, Georgia, Germany, Greece, Guatemala, Guyana, Hungary, Iceland, Iran (Islamic Republic of), Ireland, Israel, Italy, Jamaica, Japan, Kazakhstan, Kuwait, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Maldives, Malta, Mauritius, Mexico, Montenegro, Netherlands, New Zealand, Norway, Oman, Panama, Paraguay, Philippines, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saint Lucia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Suriname, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Trinidad and Tobago, Turkey, Ukraine, United Kingdom, United States of America, Uruguay, Uzbekistan, Venezuela (Bolivarian Republic of), West Bank and Gaza Strip
Group 2 Countries with other sources of cause of death information	India (16, 17, 18), Thailand, Viet Nam
Group 3 Countries with populations less than 150000	Antigua and Barbuda, Cook Islands, Dominica, Grenada, Kiribati, Micronesia (Federated States of), San Marino, Seychelles, Tonga
Group 4 Countries without eligible death registration data	Afghanistan, Albania, Angola, Armenia, Bangladesh, Benin, Bhutan, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Honduras, Indonesia, Iraq, Jordan, Kenya, Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Niger, Nigeria, Pakistan, Papua New Guinea, Peru, Rwanda, Samoa, Sao Tome and Principe, Saudi Arabia, Senegal, Solomon Islands, Somalia, South Sudan, Sri Lanka, Sudan, Swaziland, Syrian Arab Republic, Tajikistan, Timor-Leste, Togo, Tunisia, Turkmenistan, Uganda, United Arab Emirates, United Republic of Tanzania, Vanuatu, Zimbabwe



❖ Shift to Group 1: Improve VRD

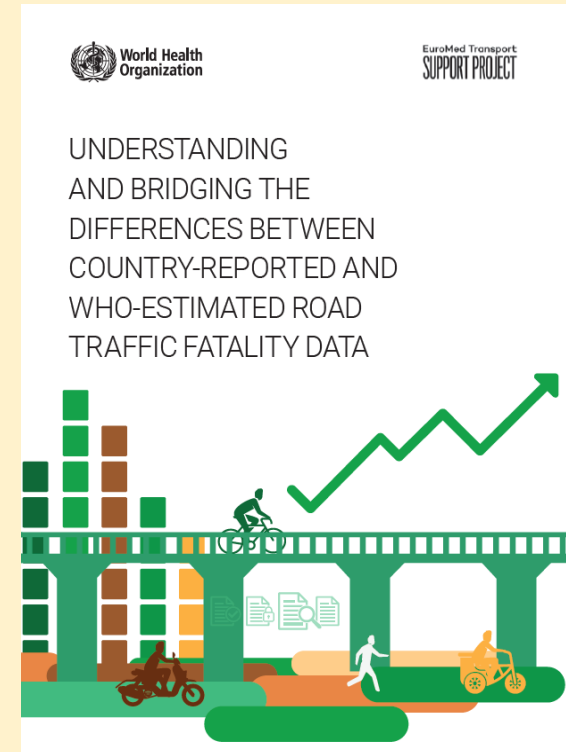
- ❖ Adoption and use of the 7th – 11th revision of the international classification of diseases (ICD) is a prerequisite for VRD eligibility.
- ❖ Adoption and use of WHO death certificate model
- ❖ Ensure data completeness >80%
- ***Long-term solution***

❖ Shift to Group 2: implementation of a national / regional study

- ❖ Cooperation between Police and Health Sector (but also Insurances, VRD...)
- ❖ Linking and matching of fatality data in the databases of the Police and the Hospitals in a given region, with specific Police and Hospital coverage.
- ❖ Estimation of the number of fatalities in unlimited time after the traffic crash
- ***Short-term and realistic solution***

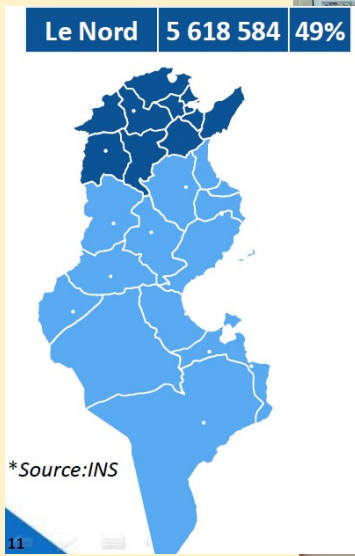


- ❖ Strengthening of **intersectoral cooperation** (Police, Health, Transport, Insurance, VRD...), establishment of a working group
- ❖ **Contact WHO** for clear and specific instructions on the conditions for accepting such a regional study
- ❖ **Framework of study** (director, Terms of Reference, funding..)
- ❖ **Pilot study** before the final study (both in contact with WHO)





❖ Regional data linkage project 2019-2020





Ministère de l'intérieur

- Observatoire national de la sécurité routière (ONSR)
- Police et Gardé nationale
- Protection Civile



Ministère de la santé

Systeme d'information sur les causes de décès (SICD)

Register des incidents liés aux accidents de la voie publique

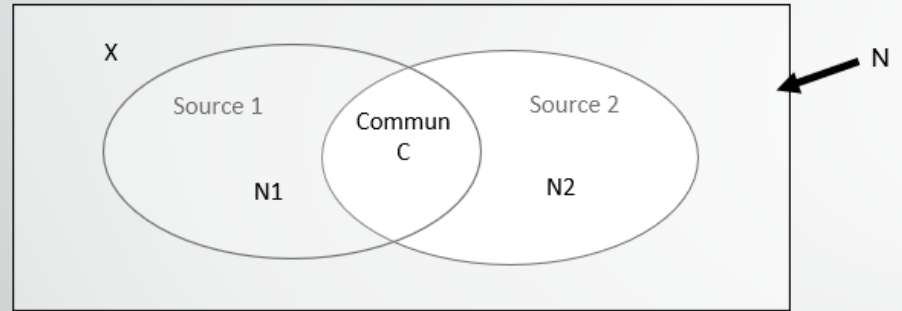


Fédération tunisienne des compagnies d'assurance



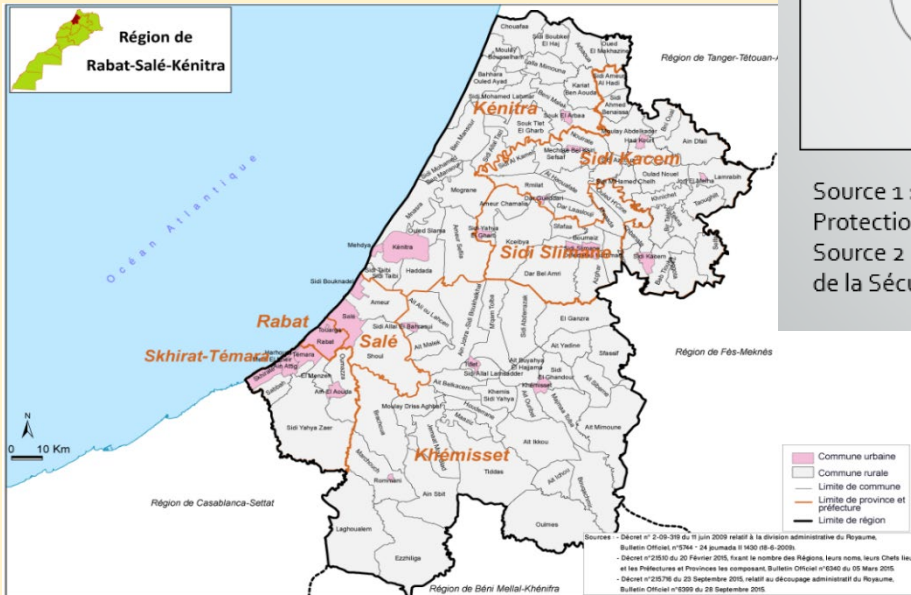
- Regional data linkage project (Rabat region, 2018)

Méthode capture-recapture à deux sources



Source 1 : Système de certification de décès (Ministère de la Santé et de la Protection Sociale)

Source 2 : Système de collecte des accidents de la circulation (Agence Nationale de la Sécurité Routière)



NARSA
الوكالة الوطنية للسلامة المرورية
NATIONAL ROAD SAFETY AGENCY





❖ EuroMed TSP efforts

- ❖ reviewed in-depth the data collection systems of the partner countries and facilitated the engagement of all relevant stakeholders
- ❖ transferred knowledge and supported capacity building
- ❖ promoted intersectoral cooperation within countries / with WHO
- ❖ published key reports including all the essential knowledge to solve data quality problems and the concrete steps for implementation

❖ Partner countries efforts

- ❖ Shared good practice and exchanged knowledge / experiences
- ❖ Took initiative in improving their data systems
- ❖ Implemented pilot studies to revise / update their data
- ❖ Made demonstrable progress in intersectoral cooperation

...important remaining challenges and work in progress...



The importance of data



**Edwards
Deming**

*In God we trust, all others
must bring data*

Famous American Professor and Statistician



Improving road crash data collection systems and data sharing in the EuroMed region

Thank you !