



Setting up road safety reliable, harmonized and comparable data systems and sharing at regional level (Activity 1A.2.6. b)

# **Final Report**

## **On Recommendations for Harmonised Definitions of Road Crash Data in EuroMed Partner Counties**

*Brussels, April 2019*





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### **Disclaimer**

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## LIST OF ABBREVIATIONS

CADaS	Common Accident Data Set
CARE	Community Road Accident Database
EC	European Commission
ERSO	European Road Safety Observatory
EU	European Union
EuroMed RRU	EuroMed Road Rail Urban Transport
EuroMed TSP	EuroMed Transport Supports Project
FIA	Federation Internationale de l'Automobile
IRTAD	International Road Traffic Accident Database
ITF	International Transport Forum
OECD	Organization for Economic Co-operation and Development
RTAP	Regional Transport Action Plan
TEN-T	Trans-European Transport Network
TMN-T	Trans-Mediterranean Transport Network
UfM	Union for Mediterranean
UNECE	United Nations Economic Commission for Europe
UNESCWA	United Nations Economic and Social Commission for Western Asia
VRD	Vital Registration Data
WHO	World Health Organization
WP.6	UNECE Working Party on Transport Statistics



## EXECUTIVE SUMMARY

Road Safety is acknowledged as a priority issue in the EuroMed partner countries: However, the collection of credible road safety data is a major challenge. In this context, the present EuroMed TSP Activity 1A.2.6. b consists of provision of TA on setting up road safety reliable, harmonized and comparable data collection system to EuroMed Partner Countries and sharing at regional level. Among the major objectives of this activity are:

- to identify the methods of road safety data collection in the countries (diagnosis);
- to report on the existing best practices, methods and tools at national, European and international, including those of the European Road Safety Observatory (ERSO), the Community Road Accident Database (CARE), WHO, UNECE etc.;
- to understand the differences of the gaps between WHO and national statistics of the concerned EuroMed Partner Countries and bridge them;
- while at the same time promote collection and processing of harmonized, credible and comparable road safety data in the region.

Following a detailed 'diagnosis' of road crash data systems in the region, **the objective of this report is the analysis of international good practice regarding road safety data definitions and relevant protocols, and the transfer of knowledge to the EuroMed Partner Countries** in order to improve the comparability and quality of their road safety data. More specifically, the analysis aims to:

- Summarise the potential of current crash data systems in the EuroMed region.
- Review international good practice regarding road crash data definitions.
- Select and present a tailored set of harmonised road crash data variables and values, as well as their definitions, to be adopted in the EuroMed region.

The present analysis is strongly **based on the review of international good practice and the establishment of cooperation with International Organisations** with important knowledge and experience regarding the improvement and harmonisation of road crash data. Particular emphasis was placed on the experiences and good practices drawn from the UNECE, namely through the Glossary for Transport statistics, as well as on the European experience, namely the CARE database with comparable and harmonised road crash data, on the basis of the specially developed European CADaS protocol. Moreover, WHO methodologies and recommendations for road crash data systems and minimum data elements were analysed.

From the 'diagnosis' of the road crash data in the EuroMed region, as well as the examination of the National Data Collection Forms that were made available to the team (Jordan & Morocco), it was found **that there is considerable variability and uncertainty regarding the degree to which basic definitions (accident, fatality etc.) for road crash data are implemented in the region** - and there are also differences between the variables and values collected



Therefore, **the EuroMed TSP recommends a relatively small but highly useful set of variables to be harmonised with international standards at a first stage.** This dataset is drawn from a synthesis of UNECE, CADaS and WHO recommendations, adjusted to the needs and potential of the countries.

As a first step, **the common definitions for the key variables: the accident, the road, the vehicles and the casualties involved (fatalities, serious or slight injuries)** are presented, since the compliance to these international standards (namely through the UNECE Glossary recommendations) is a prerequisite for any further data harmonisation.

The proposed EuroMed harmonised dataset includes **24 variables**, further distinguished into **15 basic priority and 9 additional variables** – it is thus recommended that countries start from the basic priority variables, and gradually proceed to the additional ones. The selected variables are presented in the Table below, whereas in the present report detailed definitions, scope of data collection, data format and values description are presented for each variable.

**The following steps are recommended for an efficient data harmonisation** in the EuroMed region:

1. Adoption of 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.
2. 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.
3. **Harmonisation of road crash variables and values** as per the EuroMed recommendation for a common dataset, with emphasis on the basic priority variables. The harmonisation can be implemented either through the development of transformation coefficients (e.g. to convert fatality numbers from the currently in place definitions to the new suggested ones), or through the direct adoption of the new definitions (e.g. revision of National Data Collection Forms).

***It is therefore underlined that the adoption of common definitions for road crash variables and values strongly depends on the successful implementation of basic definitions (accident, road, casualty severity) and the complete reporting of crashes / casualties***

Finally, it is noted that the present recommendations aim to serve as a first approach to be considered by the countries, and **more detailed consultations can certainly allow for country-specific plans and priorities to be identified.**





Towards EuroMed Harmonized Definitions of Road Crash Data Variables and Values

Variable		Basic	Additional	Variable definition	Suggested values*
<b>ACCIDENT (Accident ID)</b>	<b>A1. Date</b>	✓		The date on which the crash occurred	XDDMMYYYY (weekday, day, month, year)
	<b>A2. Time</b>	✓		The (local) time of the day, when the crash occurred	hhmm
	<b>A3. Crash type</b>	✓		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.
	<b>A4. Weather</b>	✓		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.
	<b>A5. Lighting conditions</b>	✓		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.
	<b>A6. Crash location</b>		✓	The location at which the crash occurred	Character string, to support latitude/longitude coordinates, linear referencing method, or link node system
	<b>A7. Impact type</b>		✓	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.
<b>ROAD (Road ID)</b>	<b>R1-A. Motorway</b>	✓		Information on whether the accident occurred on a motorway	01: Yes, 02: No, 99: Unknown
	<b>R1-B. Type of road</b>			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.
	<b>R2. Area type</b>	✓		It is indicated whether the accident occurred inside or outside an urban area.	01: Yes, 02: No, 99: Unknown
	<b>R3. Junction</b>	✓		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.
	<b>R4. Road surface conditions</b>	✓		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.
<b>V1. Vehicle type</b>	✓		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.

\* Values definitions are presented in detail in Chapter 4.3 of this report



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EuroMed TSP also reiterates its most heartfelt thanks to the representatives of international organisations and projects active in the field of road safety data harmonisation for their support and contribution. Notably, Mr. Nathan Menton (UNECE), Dr. Yarob Badr (UNESCWA), Dr. Kacem laych, (WHO), Ms. Maria-Theresa Sanz-Villegas (EC-DG MOVE), Mr. William Bird (EC-DG RTD), Dr. Maria Segui Gomez (FIA), Dr. Cristian Gonzalez (IRF), Ms. Veronique Feypell (IRTAD), Ms. Tawia Addo-Ashong (SSATP/World Bank) and Prof. George YANNIS (SaferAfrica Project).



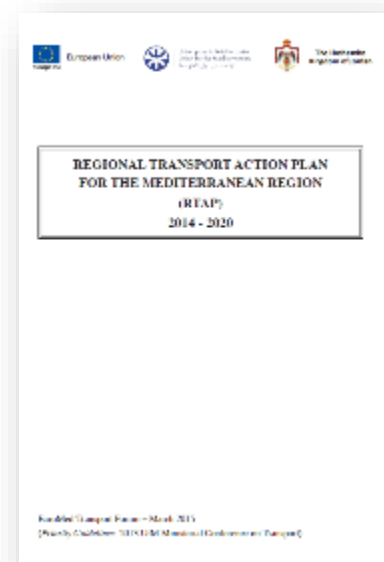
# 1. BACKGROUND AND OBJECTIVES

## 1.1. CONTEXT

The Ministers responsible for Transport of the Union for the Mediterranean (UfM) have agreed on the importance of Euro-Mediterranean transport cooperation founded on the two complementary pillars: (i) regulatory reform and convergence in all relevant different transport sectors (maritime, civil aviation, road, railway and urban transport); and (ii) establishment of the future Trans-Mediterranean Transport Network (TMN-T), to be connected with the Trans-European Transport Network (TEN-T). To this end, two Regional Transport Action Plans (RTAPs) have been elaborated by the Euro-Mediterranean Transport Forum for the Mediterranean Region, the first RTAP concerning 2007-2013 and the new one for the period 2014-2020.

To complement the work of the EuroMed Transport programme in the land transport sector and assist the implementation of the RTAPs, the European Union has launched two EuroMed Regional Transport Projects:

- The **“Road, Rail and Urban Transport” (EuroMed RRU)** that lasted 5 years (2012-2016), aimed at supporting the implementation of the Trans Mediterranean Transport Network (TMT-N) by developing appropriate regulatory framework and operational conditions to facilitate cross-border transport, to enhance land transport safety and to promote sustainable and efficient urban transport.
- The **“EuroMed Transport Support Project” (EuroMed TSP)**, started in January 2017 and will last 4 years, aiming to increase the sustainability and performance of transport operations in the Mediterranean region through increased safety in transport operations; increased efficiency / lower costs of transport; lower environmental impact of transport, thus contributing to regional economic integration, economic well-being and job creation. The project covers Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, State of Palestine and Tunisia.



**Action 10 of the 2014-2020 RTAP for the Mediterranean Region**, inter alia, calls upon the EuroMed Partner Countries pursue efforts for setting-up a reliable data collection system on road fatalities and serious road accidents, including where possible on their causes, to facilitate data comparison. It also encourages them to share their national data at regional level, similarly to the practice of the European Road Safety Observatory and the Community Road Accident Database (CARE).



## 1.2. THE ROAD SAFETY DATA ACTIVITY

Road safety related data are used by the police, transport authorities, health facilities, insurance companies and policymakers. Reliable road traffic crash data are key to identifying risks, developing strategies and interventions to address those risks, and evaluating the impact of interventions. Road traffic data are also important in persuading political leaders that road traffic injuries are a priority issue. These data can also be used in the media to make the public more aware of legislation and changes in behaviour that will improve their safety.

Following a first round of EuroMed country visits and discussions with the MOT and key stakeholders aimed at identifying country priorities in which TA from the EuroMed TSP would be required, during the inception period (Jan-March2017), it has become evident that for Tunisia and Morocco, Road Safety is priority, while for Jordan, Egypt and Lebanon it is also among the main issues to be addressed under EuroMed TSP. However, for all these countries **collection of credible road safety data is a major challenge.**

Activity 1A.2.6. b consists of provision of **TA on setting up road safety reliable, harmonized and comparable data collection system to EuroMed Partner Countries and sharing at regional level.** Among the major objectives of this activity are:

- to identify the methods of road safety data collection in the concerned Partner Countries (diagnosis);
- to report on the existing best practices, methods and tools at national, European and international, including those of the European Road Safety Observatory (ERSO), the Community Road Accident Database (CARE), WHO, International Traffic Safety Data and Analysis Group (IRTAD) of ITF-OECD, UNECE and UN SafeFits project;
- to understand the differences of the gaps between WHO and national statistics of the concerned EuroMed Partner Countries and bridge them;
- while at the same time promote collection and processing of harmonized, credible and comparable road safety data in the region.

The implementation of this activity includes TA missions, organization of national Ad-hoc seminars and working meetings with experts from the competent authorities and key stakeholders, desk work, recommendations and reporting as well as provision of advice and support.

In addition, the interest expressed by the UfM and FIA in developing Road Safety Observatories in Mediterranean, as well that of the UNESCWA in the same direction, was considered as important initiative that could build on the results of the present activity providing for their sustainability, thus possible synergies will be explored.

## 1.3. OBJECTIVES

The objective of this report is **the analysis of international good practice regarding road safety data definitions and relevant protocols, and the transfer of knowledge to the**



**EuroMed Partner Countries in order to improve the comparability and quality of their road safety data.** More specifically, the analysis aims to:

- Review international good practice regarding road crash data definitions, including data structure, road crash variables and values definitions, and data processing and coding.
- Summarise the potential of current crash data systems in the EuroMed region for further improvement with emphasis on data harmonisation.
- Select and present a tailored set of key road crash data variables and values, as well as their definitions, recommended to be adopted and harmonised with international standards in the EuroMed region.

## 1.4. STRUCTURE OF THE REPORT

The present report is structured as follows:

**Chapter 2** presents an overview of the quality of road crash data in the EuroMed Partner Countries. This is a summary of the results of the 'diagnosis' carried out at previous stages of this Activity, and the conclusions drawn there-in are used as a basis for the selection of pertinent variables and values definitions for the EuroMed region.

**Chapter 3** presents an overview of existing international recommendations and protocols for the harmonisation of road crash data, namely the UNECE Glossary for Transport Statistics, the EC CARE database with harmonised data and the respective CADaS protocol of variables and values definitions, as well as the WHO recommendations for a minimal common dataset for all countries around the globe. A comparative assessment of the suggested high-importance variables and values is carried out, resulting in a tailored selection of elements for a harmonised dataset in the EuroMed region.

**Chapter 4** presents the EuroMed TSP recommendations for road crash data definitions. First, a set of basic definitions are presented, concerning the key elements of road safety: road, vehicle, accident and casualty (fatality, serious and slight injury). These need to be adopted by the countries as a basic first step for data harmonisation. Furthermore, a full presentation of selected road crash variables and values is made, including in each case: the definition of the variable, the scope of data collection, the level of priority in harmonisation, the data format, the suggested values and their definitions.

**Chapter 5** presents recommendations for the steps that need to be taken for the improvement of the reliability and comparability of road crash data in the EuroMed region, in which the implementation of the suggested data definitions protocol is based on a number of important previous steps and prerequisites that need to be met for successful data harmonisation.



## 2. OVERVIEW OF DATA QUALITY IN THE EUROMED REGION

Pursuing of cooperation and data / knowledge sharing in the region under the EuroMed TSP is carried out with a two-fold objective: on the one hand, **to establish reliable and credible road crash data that can assist policy makers in the countries** in identifying and monitoring risks, implementing appropriate actions based on evidence, and evaluating the effectiveness of their actions for the reduction of road crash risk. On the other hand, **to achieve internationally harmonized and comparable road crash data, with the ultimate objective of establishing a regional observatory** with harmonised and comparable road crash data for the EuroMed region. For both objectives, the assessment of the current characteristics and potential of road crash data systems in the region is the first step for drafting useful and realistic recommendations for the improvement of road safety data, meeting the needs and the ongoing efforts of stakeholders in the countries.

During the previous phases of this Activity, a thorough assessment of road crash data quality, in terms of completeness and comparability, was carried out, within a dedicated 'diagnosis' analysis. The analysis of road crash data systems in the EuroMed region was carried out through dedicated missions at each of the Partner Countries, complemented with a **'diagnosis' questionnaire**, developed on the basis of international good practice criteria. The questionnaire formed the backbone of the consultations carried out. International cooperation was further strengthened through **multi-disciplinary national workshops, an inter-agency meeting bringing together international players, and a regional workshop on road safety data**.

For each country, a detailed description and assessment of the reliability, comparability and robustness of the existing road crash data systems was presented, covering both Police and Health / VRD sectors data. Moreover, data analysis, publication and sharing practices were described and evaluated. Focus was also placed on the identifications of the reasons for the discrepancy between country reported fatalities and WHO estimated fatalities for the EuroMed countries. The main findings for each country are outlined below.

In Algeria, there is a dual data collection flow by the Police and the Gendarmerie, however the **two agencies have not fully harmonised their means and procedures** (for instance, electronic means for data collection and GPS are used only by Gendarmerie). A **system is under development**, namely a central database that will be powered and operated in real time by all the police services. The **definition of person killed at 30-days is applied** in the country, **but it is not clear whether full follow-up is made**. The road crash **statistics on the country are regularly published on-line**, and it is reported that the data is used by several stakeholders for policy making and user education.

A unique context exists in **Egypt**, as road safety data collection is **fragmented between three different key stakeholders**, each one managing crash casualties within a different time frame: The **Traffic Police** is responsible for recording only fatalities 'on the spot'; the Egyptian



**Ambulances Organisation** (EOA) records any fatalities that occur during the transfer (pre-hospital); and the **Ministry of Health**, through Hospitals, records fatalities once admitted to a hospital and thereafter, without a time limit. However, unlike most countries, the Ministry of Health (Hospitals) are responsible for the follow-up of crash casualties for the 30-day period and the related update to the Police. Moreover, in practice this is done to a very small extent.

In **Jordan**, a **new system is in place in the recent years** (achieved national coverage on 2015) with **electronic data recording and on-line transmission** to the central database (the National Data Collection Form is available in Appendix 1). Extensive training procedures are in place for implementing the system. Police **data is in accordance with the 30 days definition** and a systematic follow-up is made. **Some under-reporting** may be mostly due to heavy workload / limited capacity of the Police - but this is estimated to be low.

In **Lebanon**, there is currently **no limit (e.g. 30 days) assigned to road fatalities** recording by the Police, as the process is closely linked to the court investigation. A **proposition for an updated Data Collection Form was been made**, with the explicit purpose to allow better analyses of the causes of the crash and remove the focus of data recording from the purpose of assigning the blame for the court (expected within 2018-2019); this is an important and much needed step. In addition, **under-reporting is recognised as an important issue** in the country, and it is considered due mostly due to heavy workload / limited capacity of the Police.

**Morocco** has a **systematic multi-sectoral framework** for road safety data collection, validation and sharing. There is systematic **cooperation between the Police, Health and Transport sector** with respect to the validation and publication of road crash statistics. The **country uses the 30-days definition** for road fatalities as well as a concrete definition of serious injury (hospitalized more than 6 days). Although **no electronic means are used**, the **National Data Collection Form and database are very complete** (the form is available in Appendix 1). A **considerably "open" data culture exists in the country**, with systematic publication of crash statistics, data exchange between some stakeholders etc.

In **Tunisia**, the "Garde Nationale" and the National Observatory host the national database and are the key stakeholders dealing with road crash data. Although a regular publication of road safety statistics is made through the Observatory, together with several important awareness raising and education initiatives, there are several challenges to be addressed. Most importantly, although a **data collection form exists, it is currently not used** at the crash site; Police officers draft a report with no predefined format, and the information there-in is subsequently used to fill the data collection form in the Office. **The 30 days definition is used**, however there is some **uncertainty about the completeness of the data**. **Under-reporting is openly recognised** as an issue.

The complete analysis is available at the EuroMed TSP report on **"Existing best practices, methods and tools for collection and processing reliable data, Diagnosis of the current situation in EuroMed Partner counties and Recommendations on the way forward"** and further details are beyond the scope of this report. However, a number of important conclusions were drawn from the 'diagnosis', which are taken into account in the present recommendations for common road safety definitions. These are outlined below:





There are important past and ongoing efforts in all countries to improve their data systems, and several good practice elements for each country to demonstrate. Consequently, there are **considerable opportunities for further improvement, and transfer of knowledge between countries in the EuroMed region**. However, at the same time there are important challenges remaining to be addressed and elements needing improvement in all countries, namely (see Table 2.1):

- The adoption of the definition of **person killed in 30 days** is still pending in some countries;
- Achieving a **systematic follow-up** on crash casualties for 30 days, as a responsibility of the Police, is a key challenge in all countries;
- In several countries there is strong need for establishment or upgrade of a **formal National Data Collection form** for road crashes. Good practice examples in the region can be found in Appendix 1;
- The adoption of **international definitions and protocols for road crash data** (in addition to fatality, also accident, injury severity, and main crash / driver / vehicle characteristics) is only partially in place;
- There is little or no **cooperation and exchange of knowledge and data between Police, Transport and Health Sectors** (and possibly also Insurance Sector), making the efficient follow-up of crash casualties quite complicated.
- Road crash casualty **under-reporting** is still an important issue in most of the countries, and little or no effort of implementing procedures to address it has been reported (e.g. through the linkage and cross-checking of Police and Health Sector data);
- Systematic data publication and sharing between all relevant stakeholders and the general public at national level, especially through **national observatories**, is seldom a common practice;

There is large variability in the characteristics of the data systems in the EuroMed region. Data collection procedures, variables and values collected, procedures for data validation and storage, structure of the databases, all differ to a larger or smaller degree among countries. Moreover, basic steps such as the adoption and systematic follow-up of the 30-days definition of fatalities, are not fully implemented in all countries. Consequently **the task of data harmonisation is expected to present different challenges in different countries**.

All the above are taken into account in the present recommendation for road crash data harmonisation, in order to set feasible and meaningful objectives that will allow stakeholders in the countries to stay engaged and assist them in drafting their country-specific plan towards data harmonisation.



Table 2.1. Summary of road crash data key features in the EuroMed region

	Algeria	Egypt	Jordan	Lebanon	Morocco	Tunisia
Definition of fatality at 30-days	✓	?	✓	?	✓	✓
Follow-up for 30 days	?	?	✓	?	✓	?
Concrete definition of a serious injury	?	?	✓	?	✓	?
Relational national database with disaggregate data	✓	✓	✓	✓	✓	✓
Accident variables recorded	✓	✓	✓	✓	✓	✓
Road layout variables recorded	✓	✓	✓	✓	✓	?
Driver / passenger / pedestrian variables recorded	✓	✓	✓	✓	✓	✓
Use of international definitions for variables and values	?	?	?	?	?	?
Existence of national data collection form	✓	?	✓	✓	✓	?
Updated national data collection form	?	?	?	✓	✓	?

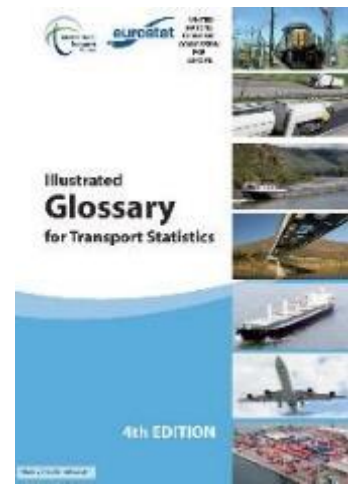


## 3. REVIEW OF EXISTING DATA PROTOCOLS

### 3.1. THE UNECE GLOSSARY FOR TRANSPORT STATISTICS

The UNECE Working Party on Transport Statistics (WP.6) is an intergovernmental body dealing with the development of appropriate **methodologies and terminology for the harmonization of statistics as well as the collection of data** from member States and the dissemination of these data. Their objectives include:

- Development of appropriate and common methodologies and terminology for the harmonization of statistics. This includes methodologies for the collection and compilation of statistics on road, rail, inland waterway, pipeline and combined transport as well as on road traffic accidents, in cooperation and coordination with other UNECE bodies, related international organizations, in order to promote the availability of comprehensive and reliable statistics for sustainable transport planning and analysis and to improve international comparability of transport statistics.
- Collection and compilation of transport statistics, including data on motor traffic, road traffic accidents and rail traffic.
- Dissemination of transport statistics through publications and also through the development and maintenance of the on-line UNECE Transport Statistics Database in order to maintain good quality, relevant, user friendly and timely transport statistics.



The Glossary for Transport Statistics is a joint publication since 1994 of the UNECE, ITF, and Eurostat ([http://www.unece.org/trans/main/wp6/publications/stats\\_glossary.html](http://www.unece.org/trans/main/wp6/publications/stats_glossary.html)). It **comprises 735 definitions and represents a point of reference for all those involved in transport statistics**. By following the guidance contained within these definitions, a considerable contribution will be given to the improvement in both the quality and comparability of transport statistics data. The vast majority of industrialised countries have adopted and use these definitions.

More specifically, Chapter B.I of the Glossary is devoted to the definitions concerning the **road infrastructure**, while Chapter B.II deals with the definitions concerning **road transport vehicles**. Finally, in Chapter B.VII of the Glossary, the definitions related to **road crashes** are presented. All these basic definitions form the backbone of road crash data harmonisation in any country, as the definition of a road crash itself is strongly related to the definitions of 'road' and 'vehicle'.

Figure 3.1 shows an example of UNECE Glossary definitions for different roads. From this example, it can be understood that, unless the definitions of 'road' in a country complies with



the above definition, the road crash statistics in the country will not be comparable at international level.

Figure 3.1. UNECE definitions of roads (paved or unpaved) (Source: UNECE/Eurostat/ITF, 2009)

**B.I-01 Road**

Line of communication (travelled way) open to public traffic, primarily for the use of road motor vehicles, using a stabilized base other than rails or air strips.

*Included are paved roads and other roads with a stabilized base, e.g. gravel roads. Roads also cover streets, bridges, tunnels, supporting structures, junctions, crossings and interchanges. Toll roads are also included. Excluded are dedicated cycle lanes.*

**B.I-02 Paved road**

Road surfaced with crushed stone (macadam) with hydrocarbon binder or bituminized agents, with concrete or with cobblestone.



**B.I-03 Unpaved road**

Road with a stabilized base not surfaced with crushed stone, hydrocarbon binder or bituminized agents, concrete or cobblestone.



## 3.2. THE EUROPEAN CARE DATABASE AND CADAS DATA PROTOCOL

### 3.2.1. THE CARE DATABASE

At European level, road accident data are available since 1991 in disaggregate level in CARE, the Community database on road accidents resulting in death or injury. CARE comprises **detailed data on individual accidents as collected by the Member States**, using a structure which allows for maximum flexibility and potential regarding analysing the information contained in the system. The purpose of CARE system is to provide a powerful tool which would make it possible to identify and quantify road safety problems throughout the European roads, evaluate the efficiency of road safety measures, determine the relevance of Community actions and facilitate the exchange of experience in this field<sup>1</sup>.

<sup>1</sup> For a detailed description of the history and the steps of the CARE database development, the reader is referred to the report 'On existing best practices, methods and tools for collection and processing reliable data, Diagnosis of the current situation in EuroMed Partner counties and Recommendations on the way forward' of the EuroMed TSP.



More specifically as regards the harmonisation of the data, initially parts of the national data sets were integrated into the CARE database **in their original national structure and definitions**, however, as existing national accident data collection systems were not always compatible and comparable among the countries, the European Commission (EC) provided and applied a framework of **transformation rules to the national data sets, allowing CARE to have compatible data** (these transformation rules are also referred to as CAREPLUS variables). Previous versions of the CARE database contained 55 harmonised and common road accident variables (see Table 3.1).

Table 3.1. Initial harmonised variables in the CARE database (CAREPLUS 1 & 2 projects)

CAREPLUS 1	CAREPLUS 2
month	registration country
hour	nationality
day of month	vehicle age
day of week	driving licence age
person class	road surface condition
injury severity (person)	region/province
sex (person)	speed limit
age (person)	alcohol test
lighting	psychophysical circumstances
natural light	alcohol level
street light	movement (pedestrian)
accident severity	carriageway type
person type	number of lanes
area type	manoeuvre (driver)
vehicle type	manoeuvre (vehicle)
motorway	junction control
collision type	security equipment
junction	road markings
junction type	hit and run
weather	

However, it has been acknowledged that more variables and values are necessary to better describe and analyse the road accident phenomenon at EU level. Due to differences in the collected data variables and values, their definitions, the differences of the accident data collection forms structures and the relevant data formats among the existing national databases, both accident data quality and availability were affected.

Under this perspective, the Common Accident Data Set (CADaS) protocol has been developed consisting of a minimum set of standardised data elements, which will allow for comparable road accident data to be available in Europe.

### 3.2.2. THE CADAS (COMMON ACCIDENT DATA SET) PROTOCOL

**CADaS consists of a minimum set of standardised data elements**, which allow for comparable road accident data to be available in Europe. CADaS can be implemented on a voluntary basis in the national accident collection systems and be gradually adopted by the EU countries. Thus, progressively, more and more common road accident data from the various countries can be available in a uniform format.



CADaS refers to the set of data to be voluntarily transmitted by each country to the EC, which should be derived from the national road accident data collection system. This means, that the EU countries are not legally obliged to adopt CADaS and can continue using their national systems. However, they are encouraged to do so, so that they can in the meantime enhance their own database. In addition, the EC recommends the use of the CADaS model for data provided after 2010. In case the countries do not wish to adopt CADaS they should continue transmitting national road accident data to the EU in the current format.

At Figure 3.1, the CARE & CADaS processes of the national road accident data files are presented. Between both approaches, the compatibility of the accident data among EU countries is ensured. The main difference of the two approaches is related to the degree of involvement of the country in the process. According to the CADaS process, transformation of the national accident data will be performed at the national level and the derived CADaS variables and values will be transmitted to the EC, where they will be included in a more automatic way into the CARE database. This process allows for more common variables and values but also for higher quality, given that the national authorities better perceive any particularities related to national data collection. Therefore, they can better identify the interrelation between the collected and the CADaS variables.

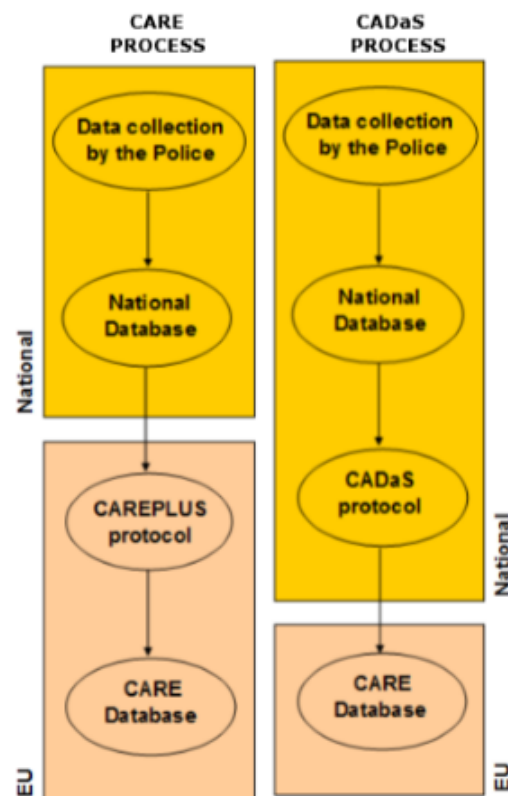


Figure 3.1. Transition from CARE to CADaS process (Source: European Commission, 2015)

Therefore, the CARE/CADaS experience shows that there can be **two different ways through which a country can align its road crash statistics with international definitions:**

- i. **By developing transformation rules**, usually in the form of correction coefficients, which can be used to convert the number of fatalities in the current data value to the internationally comparable respective data value.



- ii. **By directly adopting the international definitions** in their own data system, so that the collected data will be internationally comparable.

The CADaS variables are divided into four basic categories. The category in which each variable is included can be identified by a unique letter (code) at the beginning of the name of the respective variable. The categories and the relevant codes used to describe each category are the following:

- **A**, for Accident related variables,
- **R**, for Road related variables,
- **U**, for Traffic Unit (vehicle and pedestrian) related variables,
- **P**, for Person related variables.

Several variables include two distinct types of values, referring to different level of detail:

- Detailed values: concern information at the highest level of detail.
- Alternative values: concern information at a more aggregate level of detail, when more detailed values are not available in the country.

Alternative values do not differ from detailed values apart from their level of detail. These values are complementary and can be used when more detailed data are not available (for example concerning the "Traffic Unit type" variable, if a country does not collect the values "car" and "taxi" separately, it can provide this information through the "car or taxi" alternative value). An example of CADaS variable, values and definitions is shown in Figure 3.2 on Light Conditions, a high priority variable denoted with (H), where the Alternative Value A-7.07 is proposed when the detailed values A-7.03 to A-7.06 cannot be provided.

**A-7 LIGHT CONDITIONS (H)**

*Variable definition and scope*

Defines the level of light at the accident location, at the time of the accident. Values related to natural lighting are included, indicating the level of light in each period of the day. Additionally values concerning artificial lighting, indicate the existence of light by street lights. Information about the presence of lighting is important element in analysis of spot location or in network analysis. Additionally, important for determining the effects of road illumination on night-time accidents to guide relevant future measures.

*Values*

A-7.01	Daylight
A-7.02	Twilight
A-7.03	Darkness street lights lit
A-7.04	Darkness street lights unlit
A-7.05	Darkness no street lights
A-7.06	Darkness street lights unknown
<b>A-7.07</b>	<b>Darkness no street lights or street lights unlit</b>
A-7.99	Unknown

*Value definitions*

<b>A-7.01: Daylight</b>	The natural lighting during daytime.
<b>A-7.02: Twilight</b>	The natural lighting during dusk or dawn. Periods of half-light.
<b>A-7.03: Darkness street lights lit</b>	Includes the period of the day when there is no natural lighting, street lights exist at the accident location and are lit.
<b>A-7.04: Darkness street lights unlit</b>	Includes the period of the day when there is no natural lighting, street lights exist at the accident location but are unlit.
<b>A-7.05: Darkness no street lights</b>	Includes the period of the day when there is no natural lighting, and there are no street lights at the accident location.
<b>A-7.06: Darkness street lights unknown</b>	Includes the period of the day when there is no natural lighting, and information about street light is unknown.
<b>A-7.07: Darkness no street lights or street lights unlit</b>	Includes the period of the day when there is no natural lighting, and there are no street lights at the accident location, street lights exist at the accident location but are unlit. This alternative value when we cannot differentiate between A-7.04 and A-7.05
<b>A-7.99: Unknown</b>	The light conditions at the time of the accident were not stated.

Figure 3.2. Example of CADaS variable and value definitions for Light Conditions of the crash (Source: European Commission, 2015)

Due to the fact that the recommendation of CADaS is designed to be adopted gradually and on a voluntary basis by the EU countries, the recommended variables were separated into two



broad categories, according to their importance for road accident analysis: **variables of high importance (H) and variables of lower importance (L)**. Apart from their importance for road safety analysis, CADaS variables are separated according to the current reliability the collected data and the related collection feasibility.

The number of variable and values contained in the CADaS are presented at the following Table 3.2. It can be seen that CADaS includes **77 road crash variables, out of which 40 are recommended as ‘high importance’ (H)**.

Table 3.2. Number of variable and values contained in CADaS (Source: European Commission, 2015)

category	Code	Number of Variables			Number of Values		
		High (H) importance	Lower (L) importance	Total	Detailed values	Alternative values (A)	Total
Accident	<b>A</b>	7	6	13	91	13	104
Road	<b>R</b>	12	13	25	92	13	105
Traffic Unit	<b>U</b>	8	10	18	181	15	196
Person	<b>P</b>	13	8	21	92	10	102
<b>Total</b>		<b>40</b>	<b>37</b>	<b>77</b>	<b>456</b>	<b>51</b>	<b>507</b>

It is noted that all EU countries continue using their national systems and collect accident data in any way they find most appropriate. However, the European Commission is recommending countries to plan, e.g. when upgrading their national systems, the necessary adjustments allowing to provide the CADaS data to the EC.

### 3.3. THE WHO RECOMMENDATIONS FOR ROAD CRASH DATA SYSTEMS AND A COMMON DATA BASE

WHO has issued a Data Manual with recommendations on the development of national crash data systems (WHO, 2011), outlining the specific steps needed in order to strengthen an existing road crash system or design and implement a new one. The basic targets are considered similar when designing a common data collection system based on the currently existing ones. These steps are the following:

- Establishing a working group, which will review and discuss the road safety goals set already by the national lead agency in terms of data requirements for monitoring and achieving each one.
- Choosing a course of action, which is a range of strategies aiming to strengthen road safety systems depending on the different needs and characteristics of each region or country. The main strategies concern:
  - ✓ the improvement of data quality and system performance of road crash systems coming from police data,
  - ✓ the improvement of data quality and system performance of road crash systems coming from police data
  - ✓ the improvement of health facility-based data on road injuries,
  - ✓ the improvement of the vital registration system and particularly the death registration system





- ✓ the combination of existing data sources in order to obtain more accurate estimates on the magnitude and effects of road injuries.
- Defining the recommended minimum data elements and definitions, based on specific selection criteria.

The above steps highlight that the **harmonisation of data elements is the final step of setting up a reliable crash data collection system, following a number of previous important steps.**

The WHO data manual includes a **proposed minimum dataset with 38 variables**, their values and definitions (see Table 3.3). This dataset is in full accordance with CADaS but is slightly adjusted to reflect a more global perspective and be suitable for low- and middle-income countries, which may have particular needs and characteristics. For instance, in vehicle types, an additional value is included, namely “other motor vehicle: other vehicle not powered by an engine and not included in the previous list of values”. There are 16 additional variables proposed as “commonly collected”, but it is considered that their harmonisation is less straightforward.

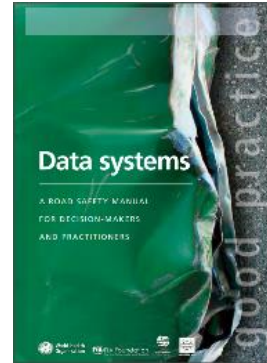


Table 3.3. WHO recommended minimum data elements (Source: WHO, 2011)

Crash related	Road related	Vehicle related	Person related
<ul style="list-style-type: none"> <li>• Crash identifier (unique reference number assigned to the crash, usually by police)</li> <li>• Crash data</li> <li>• Crash time</li> <li>• Crash municipality/ place</li> <li>• Crash location</li> <li>• Crash type</li> <li>• Impact type</li> <li>• Weather conditions</li> <li>• Light conditions</li> <li>• Crash severity<sup>o</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Type of roadway*</li> <li>• Road functional class*</li> <li>• Speed limit*</li> <li>• Road obstacles</li> <li>• Road surface conditions*</li> <li>• Junction</li> <li>• Traffic control at junction*</li> <li>• Road curve*</li> <li>• Road segment grade*</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicle number</li> <li>• Vehicle type†</li> <li>• Vehicle make†</li> <li>• Vehicle model†</li> <li>• Vehicle model year†</li> <li>• Engine size†</li> <li>• Vehicle special function†</li> <li>• Vehicle manoeuvre (what the vehicle was doing at the time of the crash)</li> </ul>	<ul style="list-style-type: none"> <li>• Person ID</li> <li>• Occupant's vehicle number</li> <li>• Pedestrian's linked vehicle number</li> <li>• Date of birth</li> <li>• Sex</li> <li>• Type of road user</li> <li>• Seating position</li> <li>• Injury severity</li> <li>• Safety equipment</li> <li>• Pedestrian manoeuvre</li> <li>• Alcohol use suspected</li> <li>• Alcohol test</li> <li>• Drug use</li> <li>• Driving licence issue date</li> <li>• Age<sup>o</sup></li> </ul>

<sup>o</sup> Derived or calculated from other data elements.  
<sup>\*</sup> Depending on the quality and detail of road inventory and hardware data available, it may be possible to obtain this data element through linkage to other databases.  
<sup>†</sup> Depending on the existence, quality and detail of a motor vehicle registration database, it may be possible to obtain this data element through linkage to motor vehicle registration files.

Figure 3.3 shows the WHO common dataset variable referring to lighting conditions of the crash – in which the analogy with the respective CADaS variable of Figure 3.3 can be confirmed.



Figure 3.3. Example of WHO recommended variable and value definitions for Light Conditions of the crash (Source: WHO, 2011)

**C9. Light conditions**  
**Definition:** The level of natural and artificial light at the crash location, at the time of the crash.  
**Obligation:** Mandatory  
**Data type:** Numeric  
**Data values:**

- 1 **Daylight:** Natural lighting during daytime.
- 2 **Twilight:** Natural lighting during dusk or dawn. Residual category covering cases where daylight conditions were very poor.
- 3 **Darkness:** No natural lighting, no artificial lighting
- 4 **Dark with street lights unlit:** Street lights exist at the crash location but are unlit.
- 5 **Dark with street lights lit:** Street lights exist at the crash location and are lit.
- 9 **Unknown:** Light conditions at time of crash unknown

**Comments:** Information about the presence of lighting is an important element in analysis of spot location or in network analysis. Additionally, important for determining the effects of road illumination on night-time crashes to guide relevant future measures.

### 3.4. SELECTION OF VARIABLES FOR EUROMED HARMONIZED DATABASE

Table 3.4 presents a comparative analysis of the minimum / priority data elements that should be harmonised to international definitions according to the UNECE Glossary (1<sup>st</sup> column), the CADaS protocol (2<sup>nd</sup> column) and the WHO protocol (3<sup>rd</sup> column). It can be seen that the variables suggested in the two protocols largely overlap.

From the ‘diagnosis’ analysis of the road crash data in the EuroMed region, as well as the examination of the National Data Collection Forms that were made available to the team (Jordan & Morocco, see Appendix 1), it is understood that an extensive harmonisation of data elements between the EuroMed countries would be a very demanding and marginally unrealistic objective. Both CADaS and WHO include a considerable number of priority variables, out of which several would be particularly challenging for EuroMed countries (e.g. impact type, road alignment, vehicle or pedestrian manoeuvre etc.).

Given the considerable uncertainty regarding the efficient implementation of basic definitions (accident, fatality etc.) in the region, and large differences between the variables and values collected in the countries, **the EuroMed TSP recommends a relatively small but highly useful set of variables to be harmonised with international standards at a first stage.**

Our recommendation draws heavily from the basic UNECE definitions of road, crash and casualty, as well as the early CAREPLUS 1 & 2 variables selection, which clearly reflect **the priorities that need to be set during the very first steps of any data harmonisation**, as was the case for the European countries at the time. However, further adjustments on the basis of specific needs and characteristics of the country were considered, resulting in the **selection of 24 variables** shown in the 4<sup>th</sup> column of Table 3.3.



The selected EuroMed variables are further distinguished into **basic priority and additional priority variables**. It is recommended that countries start from the basic priority variables and proceed to the additional ones once there is some experience with the adoption of the basic definitions.

Table 3.4. Comparative assessment of CADaS & WHO data protocols, and selection of variables for the EuroMed harmonised dataset

	UNECE	CADAS	WHO	EuroMed Selection	
	Basic definitions	High Priority variables	Minimum Data elements	Basic	Additional
<b>ACCIDENT (Accident ID)</b>					
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			•		✓
<b>ROAD (Road ID, Accident ID)</b>					
Type of road**			•		✓
Road functional class (first and second road)**	•	•	•		
Speed limit (first and second road)		•	•		
Motorway**	•	•		✓	
Urban area	•	•		✓	
Junction		•		✓	
Traffic control at junction			•		
Road Curve			•		
Road segment grade			•		
Obstacles			•		
Surface conditions		•	•	✓	
Carriageway type**		•			
Number of Lanes		•			



	UNECE	CADAS	WHO	EuroMed Selection	
	Basic definitions	High Priority variables	Minimum Data elements	Basic	Additional
<b>Work zone related</b>		•			
<b>VEHICLE (Vehicle ID, Accident ID)</b>					
<b>Vehicle type</b>	•	•	•	✓	
<b>Make</b>			•		
<b>Model</b>			•		
<b>Model year</b>			•		
<b>Engine size</b>			•		
<b>Special function</b>	•		•		
<b>Trailer</b>	•				
<b>Registration year</b>		•		✓	
<b>Manoeuvre</b>		•	•		
<b>Registration country</b>		•		✓	
<b>Hit and run</b>		•			✓
<b>PERSON (Person ID, Vehicle ID)</b>					
<b>Date of birth</b>		•	•	✓	
<b>Gender</b>		•	•	✓	
<b>Nationality</b>		•			
<b>Injury severity as reported</b>	•	•	•	✓	
<b>Road User type</b>	•	•	•	✓	
<b>Alcohol use suspected</b>			•		✓
<b>Alcotest result</b>		•	•		
<b>Alcohol level</b>			•		
<b>Drug use</b>			•		✓
<b>Driving license issue date</b>		•	•		✓
<b>Safety equipment</b>		•	•		✓
<b>Seating position in vehicle</b>		•	•		
<b>Pedestrian manoeuvre</b>			•		

\* The WHO variable 'Crash Type' brings together the noted detailed crash type variables of UNECE and / or CADaS

\*\* The WHO variable 'Type of road' brings together values from the noted more detailed road type variables of UNECE and / or CADaS

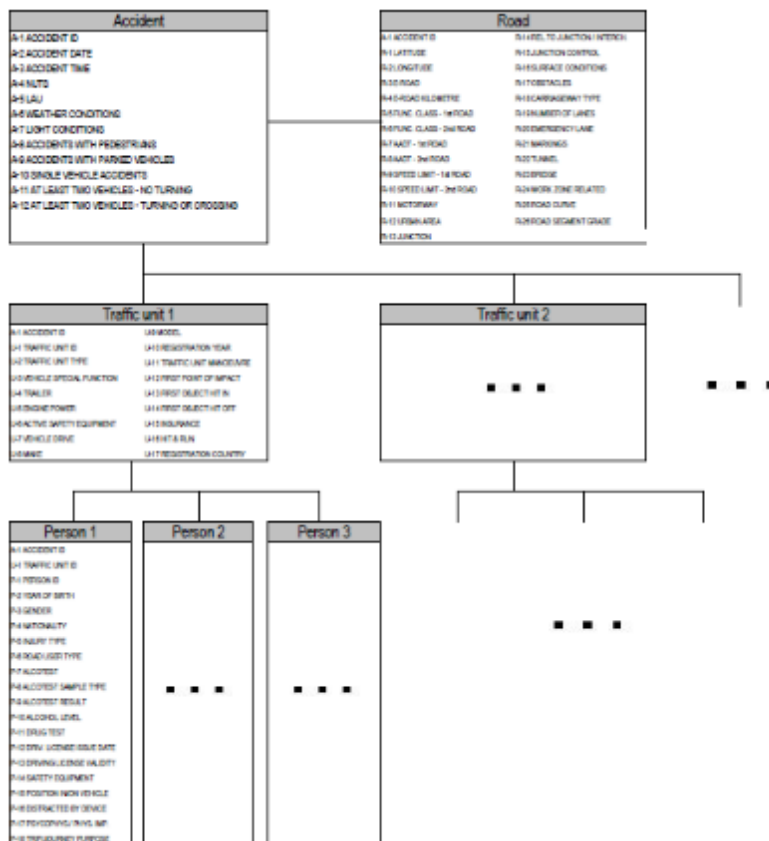


# 4. RECOMMENDATIONS FOR EUROMED HARMONIZED DEFINITIONS OF ROAD CRASH DATA

## 4.1. DATA STRUCTURE

In Figure 4.1 the interrelation among the four basic categories is presented, clearly indicating the links of the various road accident variables as recommended by CADaS. It is recommended that EuroMed Partner Countries road crash databases adopt this structure for the basic data Tables:

- **A**, for Accident related variables,
- **R**, for Road related variables,
- **V**, vehicle (and pedestrian) related variables,
- **U**, for Person related variables.





## 4.2. UNECE BASIC ROAD CRASH RELATED DEFINITIONS

### 4.2.1. ROADS

The basic definitions for roads are based on the UNECE Glossary for Transport Statistics section B.I.

#### ▶ **Road**

Line of communication (travelled way) open to public traffic, primarily for the use of road motor vehicles, using a stabilized base other than rails or air strips.

Included are paved roads and other roads with a stabilized base, e.g. gravel roads. Roads also cover streets, bridges, tunnels, supporting structures, junctions, crossings and interchanges. Toll roads are also included. Excluded are dedicated cycle lanes.

#### *Paved road*

Road surfaced with crushed stone (macadam) with hydrocarbon binder or bituminized agents, with concrete or with cobblestone.

#### *Unpaved road*

Road with a stabilized base not surfaced with crushed stone, hydrocarbon binder or bituminized agents, concrete or cobblestone.

#### ▶ **Category of road**

Roads are categorised according to three internationally comparable types:

- a) Motorway
- b) Road inside a built-up area
- c) Other road (outside built-up area).

#### *Motorway / freeway*

Road, specially designed and built for motor traffic, which does not serve properties bordering on it, and which:

- a) Is provided, except at special points or temporarily, with separate carriageways for traffic in two directions, separated from each other, either by a dividing strip not intended for traffic, or exceptionally by other means
- b) Has no crossings at the same level with any road, railway or tramway track, or footpath
- c) Is especially sign-posted as a motorway and is reserved for specific categories of road motor vehicles.

Entry and exit lanes of motorways are included irrespective of the location of the sign-posts.

Urban motorways are also included.



### *Carriageway*

Part of the road intended for the movement of road motor vehicles; the parts of the road which form a shoulder for the lower or upper layers of the road surface are not part of the roadway, nor are those parts of the road intended for the circulation of road vehicles which are not self-propelled or for the parking of vehicles even if, in case of danger, they may occasionally be used for the passage of motor vehicles. The width of a carriageway is measured perpendicularly to the axis of the road.

#### ► **Urban area**

Area within the administrative boundary or a set of administrative boundaries of a core city (settlement).

Urban areas may be classified by size according to number of inhabitants:

- a) 10 000 to 49 999 – small
- b) 50 000 to 249 999 – medium
- c) 250 000 or more – large.

Urban areas will comprise territorial units having a larger number of inhabitants, with most of those, but not necessarily all, living in built-up areas. Built-up areas as defined in B.I-05 may include villages and towns in rural districts.

#### ***Road inside a built-up area: urban road***

Road within the boundaries of a built-up area, with entries and exits sign-posted as such.

Roads inside a built-up area often have a maximum speed limit of around 50 km/h.

Excluded are motorways, express roads and other roads of higher speed traversing the built-up area, if not signposted as built-up roads. Streets are included.

#### ***Road outside a built-up area***

Road outside the boundaries of a built-up area, which is an area with entries and exits sign-posted as such.

## 4.2.2. VEHICLES

The basic definitions for vehicles are based on the UNECE Glossary for Transport Statistics section B.II.

#### ► **Road vehicle**

A vehicle running on wheels and intended for use on roads.

#### ***National road vehicle***

A road vehicle registered in the reporting country and bearing registration plates of that country or having been separately registered (trams, trolleybuses, etc.).



Where registration of a road vehicle does not apply in a specific country, a national road vehicle is a vehicle owned or leased by a person or company tax resident in that country.

### **Foreign road vehicle**

A road vehicle registered in a country other than the reporting country and bearing registration plates of that foreign country.

#### ▶ **(Bi)cycle**

A road vehicle which has two or more wheels and generally is propelled solely by the muscular energy of the persons on that vehicle, in particular by means of a pedal system, lever or handle (e.g. bicycles, tricycles, quadricycles and invalid carriages).

Included are cycles with supportive power unit.

#### ▶ **Road motor vehicle**

A road vehicle fitted with an engine whence it derives its sole means of propulsion, which is normally used for carrying persons or goods or for drawing, on the road, vehicles used for the carriage of persons or goods.

Excluded are motor vehicles running on rails.

#### ▶ **Passenger road vehicle**

A road vehicle designed, exclusively or primarily, to carry one or more persons.

Vehicles designed for the transport of both passengers and goods should be classified either among the passenger road vehicles or among the goods road vehicles, depending on their primary purpose, as determined either by their technical characteristics or by their category for tax purposes.

#### ▶ **Passenger road motor vehicle**

A road motor vehicle exclusively designed or primarily, to carry one or more persons.

Included are:

- a) Motorcycles
- b) Mopeds
- c) Passenger cars
- d) Vans designed and used primarily for transport of passengers
- e) Taxis
- f) Hire cars
- g) Ambulances
- h) Buses, coaches and minibuses





- i) Tram
- j) Motor Homes.

Excluded are light goods vehicles (see definition below).

### ***Moped***

Two, three or four-wheeled road motor vehicle which is fitted with an engine having a cylinder capacity of less than 50cc (3.05 cu.in) and a maximum authorized design speed in accordance with national regulations.

Registered and non-registered mopeds in use are included, whether or not they have a number plate. Some countries do not register all mopeds.

### ***Motorcycle***

Two-, three- or four-wheeled road motor vehicle not exceeding 400 kg (900 lb) of unladen weight. All such vehicles with a cylinder capacity of 50 cc or over are included, as are those under 50 cc which do not meet the definition of moped.

### ***Passenger car***

Road motor vehicle, other than a moped or a motor cycle, intended for the carriage of passengers and designed to seat no more than nine persons (including the driver).

Included are:

- a) Passenger cars
- b) Vans designed and used primarily for transport of passengers
- c) Taxis
- d) Hire cars
- e) Ambulances
- f) Motor homes.

Excluded are light goods road vehicles, as well as motor-coaches and buses (see definition below).

"Passenger car" includes microcars (needing no permit to be driven), taxis and passenger hire cars, provided that they have fewer than ten seats.

### ***Taxi***

Licensed passenger car for hire with driver without predetermined routes.

The method of hire is normally:

- a) Flagging down on the street
- b) Picking up at a designated taxi rank
- c) Telephoning for collection.



### **Caravan**

Road vehicle designed as living accommodation for haulage by a motor vehicle.

A caravan is mainly intended for recreational purposes. It is not used for carriage of goods or passengers. Excluded are tent trailers with a built-in tent : they are considered as a trailer for the transport of goods.

### **Motor-coach, mini-coach, bus or mini-bus**

Passenger road motor vehicle designed to seat more than nine persons (including the driver).

Included are mini-buses and mini-coaches designed to seat more than 9 persons (including the driver).

### **Bus**

Passenger road motor vehicle designed to carry more than 24 persons (including the driver), and with provision to carry seated as well as standing passengers.

The vehicles may be constructed with areas for standing passengers, to allow frequent passenger movement, or designed to allow the carriage of standing passengers in the gangway.

### **Motor coach**

Passenger road motor vehicle designed to seat 24 or more persons (including the driver) and constructed exclusively for the carriage of seated passengers.

### **Mini-bus / mini-coach**

Passenger road motor vehicle designed to carry 10- 23 seated or standing persons (including the driver).

The vehicles may be constructed exclusively to carry seated passengers or to carry both seated and standing passengers.

### **Trolleybus**

Passenger road vehicle designed to seat more than nine persons (including the driver), which is connected to electric conductors and which is not rail-borne.

This term covers vehicles which may be used either as trolleybuses or as buses, if they have a motor independent of the main electric power supply.

### **Tram (street-car)**

Passenger or freight road vehicle designed to seat more than nine persons (including the driver) or to transport freight, which is rail borne and connected to electric conductors or powered by diesel engine. The tramway is generally integrated into the urban road system.

### **► Goods road vehicle**

Road vehicle designed, exclusively or primarily, to carry goods.

Included are:



- a) Light goods road vehicles with a gross vehicle weight of not more than 3 500 kg , designed exclusively or primarily, to carry goods, e.g. vans and pick-ups
- b) Heavy goods road vehicles with a gross vehicle weight above 3 500 kg, designed, exclusively or primarily, to carry goods
- c) Road tractors
- d) Agricultural tractors permitted to use roads open to public traffic.

▶ **Light goods road vehicle**

Goods road vehicle with a gross vehicle weight of not more than 3 500 kg, designed, exclusively or primarily, to carry goods.

Included are vans designed for and used primarily for transport of goods, pick-ups and small lorries with a gross vehicle weight of not more than 3 500 kg.

▶ **Heavy goods road vehicle**

Goods road vehicle with a gross vehicle weight above 3 500 kg, designed, exclusively or primarily, to carry goods

▶ **Goods road motor vehicle**

Any single road motor vehicle designed to carry goods (e.g. a lorry), or any coupled combination of road vehicles designed to carry goods, (i.e. lorry with trailer(s), or road tractor with semi-trailer and with or without trailer).

**Lorry / truck**

Rigid road motor vehicle designed, exclusively or primarily, to carry goods.

**Road tractor**

Road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven (mainly semi-trailers).

Agricultural tractors are excluded.

**Agricultural tractor**

Motor vehicle designed exclusively or primarily for agricultural purposes whether or not permitted to use roads opened to public traffic.

**Trailer**

Goods road vehicle designed to be hauled by a road motor vehicle.

This category excludes agricultural trailers and caravans.

**Agricultural trailer**

Trailer designed exclusively or primarily for agricultural purposes and to be hauled by an agricultural tractor, whether or not permitted to use roads opened to public traffic.



### ***Semi-trailer***

Goods road vehicle with no front axle designed in such way that part of the vehicle and a substantial part of its loaded weight rests on a road tractor.

### ***Articulated vehicle***

Road tractor coupled to a semi-trailer.

### ***Road train***

Goods road motor vehicle coupled to a trailer.

Articulated vehicle with a further trailer attached is included.

### **► Special purpose road motor vehicle**

Road motor vehicle designed for purposes other than the carriage of passengers or goods.

This category includes:

- a) Fire brigade vehicles
- b) Mobile cranes
- c) Self-propelled rollers
- d) Bulldozers with metallic wheels or track
- e) Vehicles for recording film, radio and TV broadcasting
- f) Mobile library vehicles
- g) Towing vehicles for vehicles in need of repair
- h) Other special purpose road motor vehicles

## **4.2.3. ACCIDENTS**

The basic definitions for accidents are based on the UNECE Glossary for Transport Statistics section B.VII.

### **► Injury accident**

Any accident involving at least one road vehicle in motion on a public road or private road to which the public has right of access, resulting in at least one injured or killed person.

A suicide or an attempted suicide is not an accident, but an incident caused by a deliberate act to injure oneself fatally. However, if a suicide or an attempted suicide causes injury to another road user, then the incident is regarded as an injury accident.

Included are: collisions between road vehicles; between road vehicles and pedestrians; between road vehicles and animals or fixed obstacles and with one road vehicle alone. Included are collisions between road and rail vehicles.



Multi-vehicle collisions are counted as only one accident provided that any successive collisions happen within a very short time period. Injury accidents exclude accidents incurring only material damage.

Excluded are terrorist acts.

#### **Fatal accident**

Any injury accident resulting in a person killed.

#### **Non-fatal accident**

Any injury accident other than a fatal accident.

#### ▶ **Casualty**

Any person killed or injured as a result of an injury accident.

#### ▶ **Person killed**

Any person killed immediately or dying within 30 days as a result of an injury accident, excluding suicides.

A killed person is excluded if the competent authority declares the cause of death to be suicide, i.e. a deliberate act to injure oneself resulting in death.

*For countries that do not apply the threshold of 30 days, conversion coefficients are estimated so that comparisons on the basis of the 30 day-definition can be made.*

#### ▶ **Person injured:**

Any person who as result of an injury accident was not killed immediately or not dying within 30 days, but sustained an injury, normally needing medical treatment, excluding attempted suicides.

Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.

An injured person is excluded if the competent authority declares the cause of the injury to be attempted suicide by that person, i.e. a deliberate act to injure oneself resulting in injury, but not in death.

#### ▶ **Person seriously injured:**

Any person injured who was hospitalized for a period of more than 24 hours.

#### ▶ **Person slightly injured:**

Any person injured excluding persons killed or seriously injured.

Persons with lesser wounds, such as minor cuts and bruises are not normally recorded as injured.



▶ **Driver involved in an injury accident**

Any person involved in an injury accident who was driving a road vehicle at the time of the accident.

▶ **Passenger involved in an injury accident**

Any person involved in an injury accident, other than a driver, who was in or on a road vehicle, or in the process of getting in or out of a road vehicle.

▶ **Pedestrian involved in an injury accident**

Any person involved in an injury accident other than a passenger or driver as defined above.

Included are occupants or persons pushing or pulling a child's carriage, an invalid chair, or any other small vehicle without an engine. Also included are persons pushing a cycle, moped, roller-skating, skateboarding, skiing or using similar devices.

▶ **Accident between road vehicle and pedestrian**

Any injury accident involving one or more road vehicle and one or more pedestrian.

Included are accidents irrespective of whether a pedestrian was involved in the first or a later phase of the accident and whether a pedestrian was injured or killed on or off the road.

▶ **Single-vehicle road accident**

Any injury accident in which only one road vehicle is involved.

Included are accidents of vehicles trying to avoid collision and veering off the road, or accidents caused by collision with obstruction or animals on the road. Excluded are collisions with pedestrians and parked vehicles.

▶ **Multi-vehicle road accident**

Any injury accident involving two or more road vehicles.

The following types of injury accidents involving two or more road vehicles are:

a) Rear-end collision: collision with another vehicle using the same lane of a carriageway and moving in the same direction, slowing or temporarily halted

Excluded are collisions with parked vehicles.

b) Head-on collision: collision with another vehicle using the same lane of a carriageway and moving in the opposite direction, slowing or temporarily halted

Excluded are collisions with parked vehicles.

c) Collision due to crossing or turning collision with another vehicle moving in a lateral direction due to crossing, leaving or entering a road

Excluded are collisions with vehicles halted and waiting to turn which should be classified under (a) or (b).



d) Other collisions, including collisions with parked vehicles: collision occurring when driving side by side, overtaking or when changing lanes; or collision with a vehicle which has parked or stopped at the edge of a carriageway, on shoulders, marked parking spaces, footpaths or parking sites, etc.

Included in B-VII-14 (d) are all collisions not covered by (a), (b) and (c). The constituent element for classification of accidents between vehicles is the first collision on the carriageway, or the first mechanical impact on the vehicle.

## 4.3. FULL DESCRIPTION OF EUROMED SUGGESTED DATA DEFINITIONS

### 4.3.1. ACCIDENT VARIABLES AND VALUES DEFINITIONS

#### ► A1. Date

*Definition:* The date (day, month and year), on which the crash occurred.

*Scope:* Important for seasonal comparisons, time series analyses, management/administration, evaluation and linkage.

*Priority:* Basic

*Data format:* Numeric (XDDMMYYYY)

#### *Values and definitions*

**1DDMMYYYY** Monday, day, month, year of the date during which the accident occurred.

**2DDMMYYYY** Tuesday, day, month, year of the date during which the accident occurred.

**3DDMMYYYY** Wednesday, day, month, year of the date during which the accident occurred.

**4DDMMYYYY** Thursday, day, month, year of the date during which the accident occurred.

**5DDMMYYYY** Friday, day, month, year of the date during which the accident occurred.

**6DDMMYYYY** Saturday, day, month, year of the date during which the accident occurred.

**7DDMMYYYY** Sunday, day, month, year of the date during which the accident occurred.

**9DDMMYYYY** Unknown weekday, day, month and year known, of the date during which the accident occurred.

If a part of the crash date is unknown, the respective places are filled in with 99 (for day and month). Absence of year should result in an edit check.



## ► A2. Time

### *Definition*

The time of the day, when the accident occurred. Time recorded is the local time of the accident location.

### *Scope*

It allows for analyses of different time periods within the same day.

*Priority:* Basic

### *Data format*

Numeric: A four digit number is filled-in according to the following format (hh:mm).

Unknown

### *Values and definitions*

**HH:MM Time:** The time of the day when the accident occurred.

**99:99 Unknown:** The time during which the accident occurred was not stated.

Time is expressed in period of 60 minutes, using the 24-hour clock format (00.00-23:59). Midnight is defined as 00:00 and represents the beginning of a new day, not the end of the preceding day.

The hour of the accident can be provided even if the minute is unknown. For example an accident that occurred between 10 and 11 o'clock day would be recorded as 1099 indicating that the exact minute is unknown.

## ► A3. Crash type

*Definition:* The crash type is characterized by the first injury or damage-producing event of the crash.

*Scope:* Important for understanding crash causation, identifying crash avoidance countermeasures.

*Priority:* Basic

*Data type:* Numeric

### *Values and definitions*

- |  |  |
|--|--|
| <b>01 - Crash with pedestrian:</b>     | Crash between a vehicle and at least one pedestrian.   |
| <b>02 - Crash with parked vehicle:</b> | Crash between a moving vehicle and a parked vehicle. A vehicle with a driver that is just stopped is not considered as parked. |
| <b>03 - Crash with fixed obstacle:</b> | Crash with a stationary object (i.e. tree, post, barrier, fence, etc).   |
| <b>04 - Non-fixed obstacle:</b>        | Crash with a non-fixed object or lost load.  |





- 05 - Animal:** Crash between a moving vehicle and an animal.
- 06 - Single vehicle crash/non-collision:** Crash in which only one vehicle is involved and no object was hit. Includes vehicle leaving the road, vehicle rollover, cyclists falling etc.
- 07 - Crash with two or more vehicles:** Crashes where two or more moving vehicles are involved.
- 08 - Other crashes:** Other crash types not described above.

If the road crash includes more than one event, the first should be recorded, through this variable. If more than one value is applicable, select only the one that corresponds best to the first event.

For more detailed definitions see section 4.2.3 of this report.

► **A4. Weather conditions**

**Definition:** Prevailing atmospheric conditions at the crash location, at the time of the crash.

**Scope:** Allows for the identification of the impact of weather conditions on road safety. Important for engineering evaluations and prevention programmes.

**Priority:** Basic

**Data format:** Numeric

**Values and definitions**

- 01 - Clear** No hindrance from weather, neither condensation nor intense movement of air. Clear and cloudy sky included)
- 02 - Rain** heavy or light
- 03 - Snow**
- 04 - Fog, mist or smoke**
- 05 - Sleet, hail**
- 06 - Severe winds** Presence of winds deemed to have an adverse affect on driving conditions
- 08 - Other weather condition** Other weather conditions not described above
- 99 - Unknown weather condition**

► **A5. Light conditions**

**Definition:** The level of natural and artificial light at the crash location, at the time of the crash.



**Scope:** Information about the presence of lighting is an important element in analysis of spot location or in network analysis. Additionally, important for determining the effects of road illumination on night-time crashes to guide relevant future measures.

**Priority:** Basic

**Data format:** Numeric

**Values and definitions:**

- |  |  |
|--|--|
| <b>01 - Daylight:</b>                      | Natural lighting during daytime.   |
| <b>02 - Twilight:</b>                      | Natural lighting during dusk or dawn. Residual category covering cases where daylight conditions were very poor. |
| <b>03 - Darkness:</b>                      | No natural lighting, no artificial lighting  |
| <b>04 - Dark with street lights unlit:</b> | Street lights exist at the crash location but are unlit.   |
| <b>05 - Dark with street lights lit:</b>   | Street lights exist at the crash location and are lit.   |
| <b>99 - Unknown:</b>                       | Light conditions at time of crash unknown  |

#### ► **A6. Crash location**

**Definition:** The exact location at which the crash occurred. Optimum definition is route name and GPS/GIS coordinates if there is a linear referencing system (LRS), or other mechanism that can relate geographic coordinates to specific locations in road inventory and other files. The minimum requirement for documentation of crash location is the street name, the reference point, distance from reference point and direction from reference point.

**Scope:** Critical for problem identification, prevention programmes, engineering evaluations, mapping and linkage purposes.

**Priority:** Additional

**Data format:** Character string, to support latitude/longitude coordinates, linear referencing method, or link node system.

#### ► **A7. Impact type**

**Definition:** Indicates the manner in which the road motor vehicles involved initially collided with each other. The variable refers to the first impact of the crash, if that impact was between two road motor vehicles.

**Scope:** Useful for identifying structural defects in vehicles.

**Priority:** Additional

**Data type:** Numeric

**Data values:**



- 01 - No impact between motor vehicles:** There was no impact between road motor vehicles. Refers to single vehicle crashes, collisions with pedestrians, animals or objects.
- 02 - Rear end impact:** The front side of the first vehicle collided with the rear side of the second vehicle.
- 03 - Head on impact:** The front sides of both vehicles collided with each other.
- 04 - Angle impact – same direction:** Angle impact where the front of the first vehicle collides with the side of the second vehicle.
- 05 - Angle impact – opposite direction:** Angle impact where the front of the first vehicle collides with the side of the second vehicle.
- 06 - Angle impact – right angle:** Angle impact where the front of the first vehicle collides with the side of the second vehicle.
- 07 - Angle impact – direction not specified:** Angle impact where the front of the first vehicle collides with the side of the second vehicle.
- 08 - Side by side impact – same direction:** The vehicles collided side by side while travelling in the same direction.
- 09 - Side by side impact – opposite direction:** The vehicles collided side by side while travelling in opposite directions.
- 10 - Rear to side impact:** The rear end of the first vehicle collided with the side of the second vehicle.
- 11 - Rear to rear impact:** The rear ends of both vehicles collided with each other.

#### 4.3.2. ROAD VARIABLES AND VALUES DEFINITIONS

##### ► R1-A. Motorway

###### *Definition*

The variable provides information on whether the accident occurred on a motorway.

**Scope:** Important to assess the impact of motorway special road design characteristics on road safety and conduct comparative analyses between motorway and non-motorway road segments.



*Priority:* Basic

### **Data format**

Numeric

### **Value definitions**

- 01 - Yes:** Public road with dual carriageways and at least two lanes each way. All entrances and exits are sign posted and all interchanges are grade separated. Central barrier or median present throughout the road. No crossing is permitted, while stopping is permitted only in an emergency. Restricted access to motor vehicles, prohibited to pedestrians, animals, pedal cycles, mopeds, agricultural vehicles. The minimum speed is not lower than 50 km/h and the maximum speed is not higher than 130 km/h.
- 02 - No:** All other roads not described by the definition above.
- 99 - Unknown:** It was not specified whether the accident occurred on a motorway.

## ► **R1-B. Type of road**

**Definition:** Describes the type of road, whether the road has two directions of travel, and whether the carriageway is physically divided. For crashes occurring at junctions, where the crash cannot be clearly allocated in one road, the road where the vehicle with priority was moving is indicated. For detailed definitions see Chapter 4.2.1.

### **Scope**

Important for comparing crash rates of roads with similar design characteristics, and for conducting comparative analyses between motorway and non-motorway roads.

*Priority:* Additional

**Data type:** Numeric

### **Values and definitions**

- 01 - Motorway/freeway:** Road with separate carriageways for traffic in two directions, physically separated by a dividing strip not intended for traffic. Road has no crossings at the same level with any other road, railway or tramway track, or footpath. Specially sign-posted as a motorway and reserved for specified categories of motor vehicles.
- 02 - Express road:** Road with traffic in two directions, carriageways not normally separated. Accessible only from interchanges or controlled junctions. Specially sign-posted as an express road and reserved for specified categories of motor vehicles. Stopping and parking on the running carriageway are prohibited.



- 03 - Urban road, two-way:** Road within the boundaries of a built-up area (an area with sign-posted entries and exits). Single, undivided street with traffic in two directions, relatively lower speeds (often up to 50 km/h), unrestricted traffic, with one or more lanes which may or may not be marked.
- 04 - Urban road, one-way:** Road within the boundaries of a built-up area, with entries and exits sign-posted as such. A single, undivided street with traffic in one direction, relatively lower speeds (often up to 50 km/h).
- 05 - Road outside urban area:** Road outside the boundaries of an urban area built-up area (an area with sign-posted entries and exits).
- 06 - Restricted road:** A roadway with restricted access to public traffic. Includes "Cul-de-sacs/ dead-end streets", driveways, lanes, private roads.
- 08 - Other:** Roadway of a type other than those listed above.
- 99 - Unknown:** Not known where the incident occurred.

## ► R2. Area Type

### *Definition*

It is indicated whether the accident occurred inside or outside an urban area.

### *Scope*

The difference in the frequency, severity and the specific characteristics of road accidents occurring inside and outside urban areas can be analysed.

*Priority:* Basic

### *Data format*

Numeric

### *Values and definitions*

- 01 - Yes:** Area inside urban boundary signs.
- 02 - No:** Area outside urban boundary signs.
- 99 - Unknown:** Unknown whether the accident occurred inside or outside an urban area.

(see UNECE BI-18 in section 4.2.1)



### ► R3. Junction

#### *Definition*

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.

*Priority:* Basic

#### *Data format*

Numeric

#### *Values and definitions*

- 00 - Not at junction:** The accident has not occurred at a junction (or it has occurred at a distance greater than 20m from a junction).
- 01 - Crossroad:** Road intersection with four arms. Includes arm sections within 20m distance.
- 02 - Roundabout:** Circular road. Includes sections leading to it, within 20m distance.
- 03 - T or staggered junction:** Road intersection with three arms. Includes T, or staggered junction (a junction with an acute angle). Includes arm sections within 20m distance.
- 04 - Multiple Junction:** A junction with more than four arms (except roundabouts). Includes arm sections within 20m distance.
- 05 - Interchange:** Not all roads intersect at the same level.
- 06 - Other:** Other junction type not in the list of the previous values. Includes arm sections within 20m distance.
- 07 - At level crossing:** The accident occurred at level rail-road crossing
- 99 - Unknown:** The accident occurred at a junction, although it was not stated whether it was an at-grade junction or an interchange.

### ► R4. Road Surface Conditions

#### *Definition*

The effect of the prevailing atmospheric conditions on the road surface at the accident scene is indicated.

#### *Scope*

Important to identify and correct high wet surface crash locations and provide information for setting coefficient of pavement friction standards.



*Priority:* Basic

**Data format**

A two digit number corresponding to one of the values is filled-in (e.g. 05).

**Values and definitions**

- 01 - Dry:** Dry and clean road surface.
- 02 - Snow, frost, ice, slush:** Snow, frost, ice or slush on the road.
- 03 - Slippery:** Slippery road surface due to existence of sand, gravel, mud, leaves, oil on the road. Does not include snow, frost, ice or wet road surface.
- 04 - Wet, damp:** Wet road surface. Does not include flood.
- 05 - Flood:** Still or moving water on the road.
- 06 - Other:** Other road surface conditions not included in the list of the previous values..
- 99 - Unknown:** Road surface conditions at the accident location were unknown

### 4.3.3. VEHICLE VARIABLES AND VALUES DEFINITIONS

► **V1. Vehicle type**

**Definition:** The type of vehicle involved in the crash. For detailed definitions see Chapter 4.2.2

**Scope:** Allows for analysis of crash risk by vehicle type and road user type (in combination with Type of road user). Important for evaluation of countermeasures designed for specific vehicles or to protect specific road users.

*Priority:* Basic

**Data type:** Numeric

**Values and definitions:**

- 01 - Bicycle:** Road vehicle with two or more wheels, generally propelled solely by the energy of the person on the vehicle, in particular by means of a pedal system, lever or handle.
- 02 - Other non-motor vehicle:** Other vehicle without engine not included in the list above.



- 03 - Two/three-wheel motor vehicle:** Two or three-wheeled road motor vehicle (includes mopeds, motorcycles, tricycles and all-terrain vehicles).
- 04 - Passenger car:** Road motor vehicle other than a two or three-wheeled vehicle, intended for the carriage of passengers and designed to seat no more than nine (driver included).
- 05 - Bus/coach/trolley:** Passenger-carrying vehicle, most commonly used for public transport, inter-urban movements and tourist trips, seating more than nine persons. Includes vehicles connected to electric conductors and which are not rail-borne.
- 06 - Light goods vehicle (<3.5 t):** Smaller (by weight) motor vehicle designed exclusively or primarily for the transport of goods.
- 07 - Heavy goods vehicle (≥3.5 t):** Larger (by weight) motor vehicle designed exclusively or primarily for the transport of goods.
- 08 - Other motor vehicle:** Other vehicle not powered by an engine and not included in the two previous lists of values.
- 99 - Unknown:** The type of the vehicle is unknown, or it was not stated.

## ► V2. Registration Year

### *Definition*

The year when the motor vehicle was first registered. The variable is not applicable if the traffic unit is a pedestrian or a bicycle or other non-motorized vehicle.

**Scope:** The variable allows for accident analyses relating to motor vehicle age to be made.

**Priority:** Basic

### *Data format*

A four-digit number is filled-in, indicating the year of the vehicle registration.

### *Values and definitions*

- 0000 - Not applicable:** No registration year is supposed to be recorded for specific vehicles (e.g. bicycles, animal powered vehicles) or if the traffic participant is a pedestrian.
- YYYY - Registration year:** The year of the first registration of the vehicle. Estimate if necessary.
- 9999 - Unknown:** The year of the first registration of the vehicle was unknown or not recorded.





### ► V3. Hit & Run

#### **Definition**

Indicates whether the vehicle was recorded by the police at the accident location or left the accident scene right after the accident. The variable is not applicable if the traffic participant is a pedestrian.

*Priority:* Additional

#### **Data format**

Numeric

#### **Values and definitions**

00 Not applicable: The traffic participant is pedestrian.

**01 - Not Hit & Run:** Vehicle that should have stopped at the scene of the accident did stop.

**02 - Hit & Run:** Vehicle that should have stopped at the scene of the accident failed to stop and was not recorded by the police at the accident scene.

**99 - Unknown:** It was not recorded whether the vehicle stopped at the accident location or left the scene before being recorded by the police.

## 4.3.4. USER VARIABLES AND VALUES DEFINITIONS

### ► U1. Date of birth

**Definition:** Indicates the date of birth of the person involved in the crash.

**Scope:** Allows calculation of person's age. Important for analysis of crash risk by age group, and assessing effectiveness of occupant protection systems by age group. Key variable for linkage with records in other databases.

*Priority:* Basic

**Data format:** Numeric (date format – ddmmyyyy, 99999999 if birth date unknown)

### ► U2. Gender

**Definition:** Indicates the gender of the person involved in the crash.

**Scope:** Important for analysis of crash risk by gender. Important for evaluation of the effect of sex of the person involved on occupant protection systems and motor vehicle design characteristics.

*Priority:* Basic

**Data format:** Numeric



### **Values and definitions:**

- 01 - Male:** On the basis of identification documents / personal ID number or determined by the police.
- 02 - Female:** On the basis of identification documents / personal ID number or determined by the police.
- 99 - Unknown:** Gender could not be determined (police unable to trace person, not specified).

### ▶ **U3. Type of road user**

**Definition:** This variable indicates the role of each person at the time of the crash.

**Scope:** Allows for analysis of crash risk by road user type (in combination with Vehicle type). Important for evaluation of countermeasures designed to protect specific road users.

**Priority:** Basic

**Data format:** Numeric

### **Values and definitions**

- 01 - Driver:** Driver or operator of motorized or non-motorized vehicle. Includes cyclists, persons pulling a rickshaw or riding an animal.
- 02 - Passenger:** Person riding on or in a vehicle, who is not the driver. Includes person in the act of boarding, alighting from a vehicle or sitting/stranding.
- 03 - Pedestrian:** Person on foot, pushing or holding a bicycle, pram or a pushchair, leading or herding an animal, riding a toy cycle, on roller skates, skateboard or skis. Excludes persons in the act of boarding or alighting from a vehicle.
- 04 - Other:** Person involved in the crash who is not of any type listed above.
- 99 - Unknown:** It is not known what role the person played in the crash.

### ▶ **U4. Injury severity**

**Definition:** The injury severity level for a person involved in the crash.

**Priority:** Basic

**Scope:** Important for injury outcome analysis and evaluation and appropriate classification of crash severity. Important element for linkage with records in other databases.

**Data format:** Numeric

### **Values and definitions**

- 01 - Fatal injury:** Person was killed immediately or died within 30 days, as a result of the crash.



- 02 - Serious/severe injury:** Person was hospitalized for at least 24 hours because of injuries sustained in the crash.
- 03 - Slight/minor injury:** Person was injured and hospitalized for less than 24 hours or not hospitalized.
- 04 - No injury:** Person was not injured.
- 99 - Unknown:** Injury severity was not recorded or is unknown.

► **U5. Driving licence issue date**

**Definition:** Indicates the date (month and year) of issue of the person’s first driving licence, provisional or full, pertaining to the vehicle they were driving.

**Scope:** Allows calculation of number of years’ driving experience at the time of crash.

**Priority:** Basic

**Data format:** Numeric (MMYYYY)

**Values and definitions**

**MMYYYY:** The month and year of the driving license

**000000:** Never issued a driving licence

**999999:** Date of issue of first licence unknown

► **U6. Alcohol use suspected**

**Definition:** Law enforcement officer suspects that person involved in the crash has consumed alcohol. Recording mandatory for all drivers of motorized vehicles, recommended for all non-motorists (pedestrians and cyclists).

**Priority:** Additional

**Data format:** Numeric

**Values and definitions:**

**01 - No** No suspicion that the person involved in the crash has consumed alcohol

**02 - Yes** Law enforcement officer suspects that person involved in the crash has consumed alcohol

**03 - Not applicable** E.g. if person is not driver of motorized vehicle

**99 - Unknown**



## ► U7. Drug use

**Definition:** Indication of suspicion or evidence that person involved in the crash has used illicit drugs. Recording mandatory for all drivers of motorized vehicles, recommended for all non-motorists (pedestrians and cyclists).

**Priority:** Additional

**Data format:** Numeric

### **Values and definitions**

**01 - None** No suspicion or evidence of drug use

**02 - Suspicion of drug use**

**03 - Evidence of drug use** Further subfields can specify test type and values

**04 - Not applicable** E.g. if person is not driver of motorized vehicle

**99 - Unknown**

## ► U8-A. Safety equipment – occupant restraints

**Definition:** Describes the use of occupant restraints.

**Scope:** Information on the availability and use of occupant restraint systems is important for evaluating the effect of such safety equipment on injury outcomes.

**Priority:** Additional

**Data format:** Numeric

### **Values and definitions**

**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:** No occupant restraints could be used on the specific vehicle (e.g. agricultural tractors).

**08 - Other restraints used** Other restraints used than the ones listed above

**99 - Unknown:** Not known if occupant restraints were in use at the time of the crash.



## **10 - No restraints used**

### **▶ U8-B. Safety equipment – helmet**

**Definition:** Describes the use of helmet use by a motorcyclist or bicyclist.

**Scope:** Information on the use of helmets is important for evaluating the effect of such safety equipment on injury outcomes.

**Priority:** Additional

#### **Values and definitions**

**01 - Helmet worn**

**02 - Helmet not worn**

**03 - Not applicable** E.g. person was pedestrian or car occupant)

**99 - Unknown**



## 5. GUIDELINES FOR IMPLEMENTATION

The present report provides a recommendation for common road crash data variables, values and definitions aligned with the international road safety data standards. It is recommended that the EuroMed Partner countries adopt this suggested data protocol, with a **two-fold objective**: first, to allow decision makers in the countries to dispose the essential detailed information needed for road safety management, and second, to allow benchmarking the country's performance on the basis of comparable international standards and prepare the ground for eventual data sharing in the region within a regional road safety observatory.

From the 'diagnosis' carried out in the countries within the EuroMed TSP, it was concluded that **there are several important first steps that need to be taken for the harmonisation of road safety data in the region.**

The first step is **the adoption of common definitions for the key variables: the accident, the road, the vehicles and the casualties involved (fatalities, serious or slight injuries).** These definitions need to comply with the international standards, namely the UNECE Glossary recommendations. These are presented in Chapter 4.2 of this reports.

Especially as regards the definition of fatality, in addition to the adoption of the international (30-days) definition, the systematic follow-up and the timely and correct update of crash records in this respect is a basic condition for the success of the data harmonisation.

**The issue of under-reporting needs to be thoroughly investigated** in the countries, to increase the confidence that this issue – which is present in all countries data – has been addressed to a satisfactory degree and only a minor (if any) share of road crashes with casualties remains un-reported. In this context, the intersectoral cooperation between Police, Health / VRD and Insurance sectors is of major importance – this will also allow the better understanding and bridging of the difference between country reported and WHO estimated fatalities, a topic that is discussed in detail in the relevant EuroMed/WHO joint publication.

On the basis of the EuroMed TSP road crash data 'diagnosis, it is found that the considerable uncertainty regarding the efficient implementation of basic definitions (accident, fatality etc.) in the region, and large differences between the variables and values collected in the countries. Therefore, **the EuroMed TSP recommends a relatively small set of variables to be harmonised with international standards at a first stage.**

Our recommendation is based on a combined selection of variables from the CADAS and WHO data protocols, adjusted to the specific needs and current potential of the EuroMed Partner Countries. The proposed data framework includes **24 variables**, further distinguished into **15 basic priority and 9 additional priority variables**. It is recommended that countries start from the basic priority variables and proceed to the additional ones once there is some experience with the adoption of the basic definitions.

There can be **two different ways through which a country can align its road crash statistics with international definitions:**



- i. **By developing transformation rules**, usually in the form of correction coefficients, which can be used to convert the number of fatalities in the current data value to the internationally comparable respective data value.
- ii. **By directly adopting the international definitions** in their own data system, so that the collected data will be internationally comparable.

It is noted that in the second case, transformation rules will still need to be developed, in order to ensure **comparability of the national data over time**, i.e. to convert the values of the years previous to the adoption of the international definition, into the newly adopted definition.

In any case, countries may consider other additional variables, among those recommended in CADaS and / or WHO, if these are already in good accordance with their current road crash variables and values. Countries may also eventually prioritise data harmonisation in a different way, according to their specific experience and current data definitions. The present recommendations aim to serve as a first approach to be considered by the countries, and **more detailed consultations can certainly allow for country-specific plans and priorities to be identified.**



## 6. REFERENCES

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3. Eurostat / ITF / UNECE (2009). Glossary for Transport Statistics – Fourth Edition (Available on-line at <http://www.unece.org/fileadmin/DAM/trans/main/wp6/pdfdocs/glossen4.pdf>)
4. WHO (2011). Data systems: a road safety manual for decision-makers and practitioners. WHO, Geneva (Available on-line at: [http://whqlibdoc.who.int/publications/2010/9789241598965\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241598965_eng.pdf))
5. WHO Global Status Report on Road Safety. WHO, Geneva, 2015 .





# APPENDIX 1 - NATIONAL DATA COLLECTION FORMS IN EUROMED REGION

Jordan

مديرية الشرطة : مركز أمن : رقم الحادث في المركز الأمني : الرقم المتكامل	
اسم ورتبة منظم التقرير : الرقم : التوقيع : التاريخ :	
<b>المملكة الأردنية الهاشمية</b> <b>مديرية الأمن العام</b> <b>تقرير مخطط حادث مروري/اصابات بشرية</b>	
١- رقم الحاسوب : ٢- مديرية الشرطة : ٣- مركز أمن :	٤- المحافظة : ٥- رقم الحادث في المركز الأمني : ٦- نوع الحادث الأساسي :
٧- انا كان نوع الحادث صدم (حدد) : ٨- التصادم الثانوي : ٩- شكل الحادث :	١٠- حدة الحادث : ١١- عدد المركبات المشتركة بالحادث : ١٢- عدد المصابين بالحادث :
١٣- ساعة وقوع الحادث : ١٤- التاريخ : ١٥- اليوم :	١٦- مكان الحادث : (أ) : (ب) :
<b>معلومات الحادث من الطريق</b>	
أ. إذا وقع الحادث داخل المدن أذكر : ١٧- المدينة / القرية : ١٨- منطقة : ١٩- حي : ٢٠- اسم الشارع :	
ب. إذا وقع الحادث خارج المدن أذكر : ٢١- رقم الطريق : ٢٢- العلامة الكيلومترية : ٢٣- المسافة من التقاطع المرجعي بالمتر :	
إذا وقع الحادث على تقاطع / إشارة ضوئية أذكر : ٢٤- اسم الشارع المقاطع : ٢٥- شكل التقاطع :	
٢٦- اتجاهات سير الطريق : ٢٧- عدد مسارب الاتجاه : ٢٨- نوع سطح الطريق : ٢٩- حالة سطح الطريق : ٣٠- خصائص الطريق : ٣١- حدود السرعة :	
٣٢- ضوابط حركة السير : ٣٣- حالة الطقس : ٣٤- الإضاءة : ٣٥- ضوابط حركة المشاة : ٣٦- الإحداثيات من : ٣٧- الإحداثيات من : ٣٨- ملكيات متضررة : ٣٩- إسم العاكس :	
<b>معلومات المركبة رقم ( ) في مخطط الحادث</b>	
٤١- هل المركبة معطومة : ٤٢- صفة التسجيل : ٤٣- فئة المركبة : ٤٤- رقم اللوحة : ٤٥- سنة الصنع : ٤٦- سنة الصنع : ٤٧- رقم المقطورة : ٤٨- نقطة التصادم الأولى : ٤٩- مناطق الضرر للمركبة : ٥٠- مناطق الضرر للمقطورة : ٥١- اسم العاكس : ٥٢- نوع المركبة : ٥٣- جنسية المركبة : ٥٤- عدد الركاب في المركبة : ٥٥- صفة الاستعمال : ٥٦- المركبة الأخرى التي اصطدمت بها : ٥٧- مسار المركبة لحظة الحادث : ٥٨- نوع التأمين : ٥٩- شركة التأمين : ٦٠- رقم العقد : تاريخ انتهائه :	
<b>معلومات عن سائق المركبة أعلاه</b>	
٦١- هل السائق مرخص : ٦٢- الرقم الوطني : ٦٣- فئة الرخصة : ٦٤- مركز إصدار الرخصة : ٦٥- رقم الرخصة : ٦٦- جهة الرخصة : ٦٧- سنة الإصدار : ٦٨- وسائل السلامة للسائق : ٦٩- الاسم : ٧٠- الجنسية : ٧١- تاريخ الميلاد : ٧٢- الجنس : ٧٣- المستوى التعليمي : ٧٤- العنوان : الهاتف :	
<b>تحديد مسؤولية الحادث</b>	
٧٥- أخطاء السائق : ٧٦- تصرف المشاة : ٧٧- تصرف الراكب : ٧٨- عبور المركبة : ٧٩- عبور الطريق : ٨٠- الجهة المسؤولة عن عبور الطريق : هاتف :	
٧١- مسببات أخرى للحادث : ٧٢- مخالفات أخرى للسائق : التاريخ : التوقيع : الرقم : اسم ورتبة منظم التقرير :	
٧٣- مسببات أخرى للحادث : ٧٤- مخالفات أخرى للسائق : التاريخ : التوقيع : الرقم : اسم ورتبة منظم التقرير :	



٢ - مديرية الشرطة :	٣ - المركز الأمني :	٥ - رقم الحادث في المركز الأمني :		
<b>** معلومات المصابين **</b>				
الرقم التسلسلي	رقم المركز في التقرير	الاسم	العنوان	
حدة الإصابات	موقع المصاب	الجزء المصاب	العمر	الجنس
الجنسية	الاستور التاريخي	رسائل السلامة المشاة	رسائل السلامة للركاب	
حدد اتجاه الشمال بسهم	الرسم التخطيطي للحادث			
<div style="display: flex; justify-content: space-around; align-items: center;"> </div>				
دليل الرسم :				
الوصف الكتابي للحادث :				
الشهود : الاسم :				
العنوان :				
الهاتف :				
الاسم :				
العنوان :				
الهاتف :				
الاسم :				
العنوان :				
الهاتف :				
التاريخ	التوقيع	الاسم	الرتبة	الرقم
				منظم التقرير ١
				منظم التقرير ٢
				الضابط المدقق



<p>١- عمان ٢- البلقاء ٣- اربيد ٤- الكرك ٥- المفرق ٦- معان ٧- الزرقاء ٨- الطفيلة ٩- جرش ١٠- عجلون ١١- مادبا ١٢- العقبة ١٣- الرمثا ١٤- البادية ١٥- الضواحي ١٦- الرصيفة</p>	<p>٢- مديرية الشرطة</p>
<p>١- عمان ٢- البلقاء ٣- اربيد ٤- الكرك ٥- المفرق ٦- معان ٧- الزرقاء ٨- الطفيلة ٩- جرش ١٠- عجلون ١١- مادبا ١٢- العقبة</p>	<p>٤- المحافظة</p>
<p>١- صدم ٢- مشاة ٣- تدهور</p>	<p>٦- نوع الحادث الاساسي</p>
<p>١- صدم مركبة متحركة ٢- صدم مركبة متوقفة ٣- صدم دراجة آلية ٤- صدم حيوان ٥- صدم عامود ٦- صدم حاجز حماية معدني ٧- صدم حاجز حماية خرساني ٨- صدم شجرة ٩- صدم شاخص ١٠- صدم جسم ثابت ١١- سقوط من مركبة ١٢- سقوط من مركبة (حدود...)</p>	<p>٧- اذا كان نوع الحادث صدم</p>
<p>١- صدم مركبة اخرى ٢- مشاة ٣- صدم جسم ثابت ٤- تدهور ٥- لا يوجد</p>	<p>٨- التصادم الثانوي</p>
	<p>٩- شكل الحادث</p>
<p>١- اضرار مادية ٢- إصابة بسيطة ٣- إصابة بليغة ٤- إصابة مميتة</p>	<p>١٠- حدة الحادث</p>
<p>١- السبت ٢- الاحد ٣- الاثنين ٤- الثلاثاء ٥- الاربعاء ٦- الخميس ٧- الجمعة</p>	<p>١٥- اليوم</p>
<p>١- داخل قرية او مدينة ٢- خارج المدن والقرى ٣- داخل ساحات مغلقة ٤- أمام مؤسسة تعليمية (حدد.....) ٥- أخرى (حدد.....)</p>	<p>١٦- مكان الحادث</p>
<p>١- + ٢- T ٣- Y ٤- دوار ٥- سكة حديد ٦- متعددة الأرجل ٧- جسر ٨- نفق</p>	<p>٢٨- شكل التقاطع</p>
<p>١- اتجاه واحد ٢- اتجاهين مفصول بجويزة وسطية ٣- اتجاهين غير مفصول بجويزة وسطية</p>	<p>٢٩- اتجاهات سير الطريق</p>
<p>١- مسرب واحد ٢- مسربين ٣- ثلاثة مسارب ٤- اكثر من ثلاثة مسارب</p>	<p>٣٠- عدد مسارب الاتجاه</p>
<p>١- اسفلتي ٢- اسمنتي ٣- حصوي ٤- ترابي ٥- خشبي ٦- معدني</p>	<p>٣١- نوع سطح الطريق</p>
<p>١- جافد ٢- ميثل ٣- تليج ٤- جليدي ٥- طيني ٦- زيتي ٧- رملي</p>	<p>٣٢- حالة سطح الطريق</p>
<p>١- مستقيم مسنوي ٢- مستقيم مرتقي ٣- مستقيم ومنحدر ٤- منحنى مسنوي ٥- منحنى مرتقي ٦- منحنى منحدر</p>	<p>٣٣- خصائص الطريق</p>
<p>١- شرطية ٢- إشارة ضوئية ٣- شرطية وإشارة ضوئية ٤- إشارة ضوئية غير عاملة ٥- شاخصه لقف ٦- شاخصه إعطاء الاوتوية ٧- علامات سطح الطريق الالزامية ٨- شواخص الزامية ٩- ضوء اصفر متقطع ١٠- إشارة حمراء متقطعة ١١- بدون ضوابط</p>	<p>٣٥- ضوابط حركة السير</p>
<p>١- صافى ٢- ضباب ٣- مطر ٤- ثلج ٥- غبار ٦- رياح عاصفة</p>	<p>٣٦- حالة الطقس</p>
<p>١- نهار ٢- شروق ٣- ليل وطريق باضاءة كافية ٤- ليل وطريق باضاءة غير كافية ٥- ظلام ٦- غروب</p>	<p>٣٧- الإضاءة</p>
<p>١- إشارة مشاة ضوئية ٢- ممر مشاة ٣- حواجز مشاة ٤- شرطية مرور ٥- ارضفة ٦- مرشد مرور ٧- شواخص تحذيرية ٨- بدون ضوابط</p>	<p>٣٨- ضوابط حركة المشاة</p>
<p>١- المركبة مطومة ٢- المركبة مجهزة</p>	<p>٤٢- هل المركبة معلومة</p>
<p>١- قسور ملكية ٢- رئيس الوزراء والوزراء ٣- مجلس الأعيان ٤- مجلس النواب ٥- حكومة ٦- هيئات دبلوماسية ٧- هيئات تنفيذية ٨- هيئة نوابية (لوحة زرقاء) ٩- مراسم ١٠- خصوصي ١١- عمومي ١٢- أشغال ١٣- زراعي ١٤- إدخال مؤقت ١٥- دراجة آلية ١٦- تأجير سياحي ١٧- إدخال جمركي ١٨- ترانزيت ١٩- مجلس قضائي ٢٠- سلطة العقبة ٢١- العقبة الخاصة ٢٢- مطورة ٢٣- مؤقت ٢٤- تجارية ٢٥- عسكرية (حدد.....) ٢٦- بدون لوحة</p>	<p>٤٣- صفة التسجيل</p>



<p>١- دراجة كتيبة ٢- مركبة زراعية ٣- مركبة اشغال ٤- سيارة ركوب صغيرة ٥- ركوب متوسطة ٦- حافلة ٧- شحن قاطرة ومقطورة ٨- شحن صغير ٩- شحن متوسط ١٠- شحن كبير ١١- شحن قاطرة ونصف مقطورة ١٢- نقل مشترك ١٣- مركبة ذات استعمال خاص ١٤- رأس قاطر غير معدة للشحن</p>	<p>٤٤- فئة المركبة</p>
<p>١٨- حافلة ١٩- أسفل المركبة ٢٠- جميع أجزاء المركبة</p>  <p>١٢- حافلة ١٣- أسفل المركبة ١٤- أسفل المركبة ١٥- جميع أجزاء المركبة</p> 	<p>٤٨- نقطة التصادم الأولى ٤٩- مناطق الضرر للمركبة ٥٠- مناطق الضرر للمقطورة او نصف المقطورة</p>
<p>١- تكسي ٢- سرفيس ٣- سفريات خارجية ٤- سيارات تدريب سواقة ٥- نقل طلاب ٦- نقل ركاب ٧- قلاب ٨- صهريج ماء ٩- صهريج نعل ١٠- صهريج مواد خطرة ١١- صهريج مواد اخرى ١٢- براد ١٣- ناقلة مركبات ١٤- ساحة ١٥- مركبة طوارئ ١٦- ونش ١٧- قان ١٨- بكمب ١٩- اخرى (حدد)</p>	<p>٥٤- صفة الاستعمال</p>
<p>١- على مسار الطريق ٢- الخروج من مسار الشارع ٣- الدخول الى مسار المشاة ٤- مسار باص ٥- مسار تخزيني ٦- مدخل كراج ٧- خارج الطريق</p>	<p>٥٦- مسار المركبة لحظة وقوع الحادث</p>
<p>١- تأمين شامل ٢- تأمين ضد الغير ٣- غير مبرز ٤- لا يوجد</p>	<p>٥٧- نوع التأمين</p>
<p>١- السائق مرخص ٢- السائق غير مرخص</p>	<p>٥٨- هل السائق مرخص</p>
<p>١١- فئة اولى ٢١- فئة ثانية (أب) ٢٢- فئة ثانية (أ) ٢٣- فئة ثانية (ب) ٢٤- فئة ثالث ٢٥- فئة رابعة ٥١- فئة خاصة ٦١- فئة سادسة (أب) ٦٢- فئة سادسة (أ) ٦٣- فئة سادسة (ب) ٧١- فئة سابعة ٨١- مشترك</p>	<p>٦٠- فئة الرخصة</p>
<p>١- عمان/الإبارة ٢- عمان/العمومي ٣- عمان الغربية ٤- جنوب عمان ٥- إربد ٦- المفرق ٧- الزرقاء ٨- جرش ٩- السلط ١٠- مادبا ١١- الكرك ١٢- الطفيلة ١٣- معان ١٤- العقبة ١٥- عجلون ١٦- الشونة ١٧- الرمثا</p>	<p>٦١- مركز إصدار الرخصة</p>
<p>١- أردنية ٢- غير أردنية (حدد) ٣- تصريح جيش ٤- تصريح أمن عام ٥- تصريح دفاع مدني ٦- تصريح مخابرات</p>	<p>٦٣- جهة الرخصة</p>
<p>١- حزام أمان مستخدم ٢- حزام أمان غير مستخدم ٣- خوذة رأس مستخدمة ٤- خوذة رأس غير مستخدمة ٥- وسادة هوائية ٦- مستر رأس ٩- اخرى</p>	<p>٦٥- وسائل السلامة المستخدمة</p>
<p>١- ذكر ٢- انثى</p>	<p>٦٩- الجنس</p>
<p>١- أمي ٢- متعلم ٣- ثانوية عامة ٤- دبلوم ٥- جامعي ٦- دراسات عليا</p>	<p>٧٠- المستوى التعليمي</p>
<p>١- حدد حسب بنود المخالفات والعقوبات في قانون السير ٢- لا يوجد</p>	<p>٧٢- أخطاء السائقين</p>
<p>١- يتخالف إشارة المشاة الضوئية ٢- يقطع الطريق من مكان خاطيء ٣- يلعب على الطريق ٤- يمشي على الطريق رقم وجود رصيف ٥- يقطع الشارع رقم وجود جسر او نقل مشاة على بعد أقل من ١٠٠ متر ٦- يقطع الشارع رقم وجود ممر مشاة لا بعد من ١٠٠ متر ٧- يقطع من أمام مركبة واقفة ٨- يمشي على الطريق مع حركة إتجاه السير</p>	<p>٧٣- تصرف المشاة</p>
<p>١- يبرز جسمه او جزء من جسمه خارج المركبة ٢- ينزل من مركبة قبل التوقف ٣- يصعد في مركبة قبل التوقف ٤- يتعلق بالمركبة ٥- الجلوس فوق سطح المركبة ٩- اخرى (حدد)</p>	<p>٧٤- تصرف الراكب</p>
<p>١- لا يوجب ٢- إبطارات ٣- اضوية أمامية ٤- اضوية خلفية ٥- اضوية الفرامل ٦- مساحات زجاج ٧- نظام التوجيه ٨- فرامل ٩- مرابيا ١٠- لمزازات ١١- واقبات الوحل ١٢- عطل محرك ١٣- أعطال اخرى (حدد)</p>	<p>٧٥- عيوب المركبة</p>
<p>١- لا يوجب ٢- حفريات ٣- تجمع مياه ٤- عمل على الطريق بدون شواخص تحذيرية ٥- مخلقات اتصال الضيائه ٦- مناهل مرتفعة أو منخفضة ٧- خلل في حواف الطريق ٨- نقص في الشواخص المرورية ٩- خلل في الشواخص أو شواخص مخفية ١٠- خلل في العلامات الأرضية ١١- خلل في حاجز الحماية ١٢- الميلان الجانبي الخاطيء على المتعطف ١٣- اخرى (حدد)</p>	<p>٧٦- عيوب الطريق</p>
<p>١- لا يوجد ٢- مركبة واقفة ٣- مركبة متحركة ٤- اشعة الشمس ٥- الضوء العالي ٦- اشجار ٧- مياثي ٨- سور ٩- شاشة ١٠- منحني رأسي محدب ١١- منحني رأسي مقعر ١٢- منعطف افقي ١٣- اخرى (حدد)</p>	<p>٧٧- مسببات أخرى للحادث</p>
<p>١- سائق ٢- لأمي وسط ٣- لأمي يمين ٤- خلف يسار ٥- خلف وسط ٦- خلف يمين ٧- راكب باص ٨- راكب صندوق الشحن ٩- دراجة نارية ١٠- يمشي على الطريق ١١- يمشي على الرصيف ١٢- يمشي او يقف على جزيرة وساحية ١٣- يعمل على الطريق ١٤- خارج الطريق ١٥- على تقاطع يتحكم بإشارة ضوئية أو شرطي مرور ١٦- دراجة هوائية ١٧- يدفع أو يجر عربة ١٨- ينتظر للركوب ١٩- يركب في مركبة ٢٠- يمشي على الطريق لعدم وجود رصيف ٢١- يمشي على الطريق عكس حركة إتجاه السير</p>	<p>موقع المصاب</p>
<p>١- إصابة بسيطة ٢- إصابة بالغة ٤- مميتة</p>	<p>حدة الإصابة</p>
<p>١- الرأس ٢- الرقبة ٣- الصدر ٤- الظهر ٥- اليد اليمنى ٦- اليد اليسرى ٧- الساق اليمنى ٨- الساق اليسرى ٩- أسفل الظهر ١٠- جميع أجزاء الجسم</p>	<p>الجزء المصاب</p>
<p>١- ملابس فاتحة ٢- ملابس عاكسة ٣- دراجة هوائية مضادة ٤- خوذة رأس</p>	<p>وسائل السلامة للمشاة</p>
<p>١- حزام أمان مستخدم ٢- حزام أمان غير مستخدم ٣- خوذة رأس مستخدمة ٤- خوذة رأس غير مستخدمة ٥- وسادة هوائية ٦- مستر رأس ٧- مقعد أطفال مستخدم ٨- مقعد أطفال غير مستخدم ٩- اخرى (حدد)</p>	<p>وسائل السلامة للركاب</p>



**Morocco**

## FORMULAIRE DES STATISTIQUES D'ACCIDENTS CORPORELS DE LA CIRCULATION ROUTIERE

Renseignements confidentiels à remplir pour tous les accidents corporels même s'ils ne donnent pas lieu à une procédure

NUMERO D'ORDRE Réserve au service central D.R.		_ _ _ _	CODE		1
ETABLI PAR Sûreté Nationale	2	Code Sûreté Nationale		_ _ _ _	N° de P.V.  _ _ _ _
DATE DE L'ACCIDENT	Année	Mois	Jour	Heure	Province de _____
	_	_	_	_	
TOTAL VEHICULES IMPLIQUES		_ _	TOTAL TUÉS		_ _
TOTAL BLESSÉS		_ _			
<b>ETAT DE CHAUSSEE</b> 1- Revêtue bonne 2- Revêtue mauvaise 3- Revêtue très mauvaise 4- Non revêtue		_	<b>ETAT DE SURFACE</b> 1- Sec 2- Mouillé 3- Enneigé ou verglacé 4- Autres		_
		<b>LUMIERE</b> 1- Nuit 2- Jour			
				<b>INTEMPÉRIES</b> 1- Temps normal 2- Pluie 3- Chute de neige 4- Bruillard 5- Vent fort, tempête	
				_	

### ACCIDENTS EN AGGLOMERATION

AGGLOMERATION DE _____	Code	_ _
LOCALISATION 1- Hors intersection 2- En intersection 3- En passage à niveau		_
ACCIDENTS HORS INTERSECTION : boulevard ou rue _____	Code	_ _
ACCIDENTS EN INTERSECTION : place ou carrefour _____	Code	_ _
TYPE DE CARREFOUR 1- Carrefour simple sans feux ou stop 2- Carrefour simple avec feux ou stop 3- Carrefour multiple avec feux ou stop 4- Carrefour multiple sans feux ou stop		_
PROFIL EN LONG 1 - Plat 2 - Pente 3 - Sommet de côte		_
TRACE EN PLAN 1 - Partie rectiligne 2 - En courbe à gauche 3 - En courbe à droite 4 - En S		_





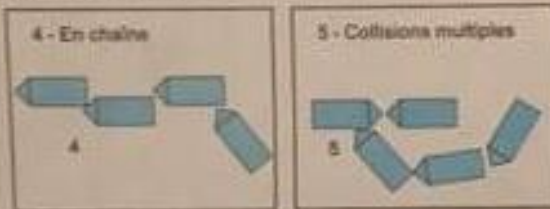
### CIRCONSTANCES DE L'ACCIDENT

#### 1- TYPE DE COLLISION

Véhicule contre Véhicule



Véhicules contre Véhicules



7 - Autres collisions  
8 - Sans collision

Résumé succinct des  
circonstances de l'accident

Blank lines for summarizing the accident circumstances.

#### 2 - VÉHICULE PROVOQUANT L'ACCIDENT

##### OBSTACLE HEURTE

Fixe

- 01 - Véhicule en stationnement
- 02 - Glissière métallique
- 03 - Glissière béton
- 04 - Autre glissière
- 05 - Bâtiment, mur, pile de pont
- 06 - Support signalisation verticale
- 07 - Poteau
- 08 - Mobilier urbain
- 09 - Bordure de trottoir
- 10 - Fossé, talus, paroi rocheuse
- 11 - Autre obstacle fixe sur chaussée
- 12 - Autre obstacle fixe sur trottoir ou accotement
- 13 - Sortie de chaussée sans obstacle

MOBILE

- 14 - Piéton
- 15 - Véhicule
- 16 - Animal
- 17 - Véhicule sur rail
- 18 - Autres

##### POINT DE CHOC INITIAL

- 1 - Avant
- 2 - Avant-droit
- 3 - Avant-gauche
- 4 - Arrière
- 5 - Arrière-droit
- 6 - Arrière-Gauche
- 7 - Côté droit
- 8 - Côté gauche
- 9 - Chocs multiples (bénévo)

##### MANŒUVRE PRINCIPALE AVANT L'ACCIDENT

CIRCULANT

- 01 - Même sens, même file
- 02 - Entre 2 files
- 03 - En marche arrière
- 04 - A contresens
- 05 - En franchissant le terre-plein central
- 06 - En s'infiltrant
- 07 - En faisant demi-tour sur la chaussée

CHANGEANT DE FILE

- 08 - A gauche
- 09 - A droite

DÉPORTE

- 10 - A gauche
- 11 - A droite

TOURNANT

- 12 - A gauche
- 13 - A droite

DÉPASSANT

- 14 - A gauche
- 15 - A droite

DIVERS

- 16 - Traversant la chaussée
- 17 - Manoeuvre de stationnement
- 18 - Manoeuvre d'évitement
- 19 - Ouverture de porte
- 20 - Arrêt (hors stationnement)
- 21 - En stationnement (Avec occupants)



## APPENDIX 2 – LIST OF STAKEHOLDERS

### Algeria

- Abdelghani Hamani, SDCR, DTTU
- Souhila Lacheheb, DTTU
- Melourji Bourad, DTTU
- Mohamed Hafsi, DG Civil Protection
- Selmani Nawel, DG Civil Protection
- Brahim Wahiba, MSPRH
- Mouloubi Guemaf, Gendarmerie Nationale
- Merouche Mounir,
- Ali Meghaoui,
- Behloul Hocine, National Road Safety Prevention Centre (CNPSR), WHO National Focal Point
- Meradji Abderrohmane, DGSN
- Bouaoune Chaoufri, DGSN

### Egypt

- Ahmed El-Ansary, Chairman EAO
- Amr Rashid, Assistant Chairman EAO
- Emad el din Abdelmotaal, Activity National Focal Point
- General Khaled Aly, Deputy Minister of Interior
- Ayman Sameer Eldabaa, General, Secretary Road Safety Council
- Mourid Albent, Colonel Traffic Police
- El Morsey Elhelw, Chairman LTRA
- Hanan Abdel Wahed, Manager LTRA
- Haytan Khamis, L. Colonel Traffic Police
- Ahmed Ghazy, L. Colonel Traffic Police

### Jordan

- Eng. Sharihan Abu-Haswah, Ministry of Transport
- Eng. Majde Abu Hammoudeh, Ministry of Transport
- Brigadier Eng. Ahmad Salem Al-Warawra, Director of Jordan Traffic institute
- Eng. Fuad Almaaytah, Jordan Traffic institute
- Colonel Emad Shwoman, Joint command and control center
- Colonel Firas Aqueel Al-Dweiri, Joint command and control center
- Lt. Colonel Amer Nweelaty, Joint command and control center
- Colonel Yaser Alhabahbeh, Head of Traffic Accident Investigation, Traffic Department
- Captain Eng. Suha Albalawneh, Head of Studies Unit, Traffic Department
- Dr. Mohmmad Salah Mahmmud Salah, Ministry of Health
- Dr. Ahlam Abu Diab, Ministry of Health





- H.E. Hesham Khasawneh, Head of the Licenses Department
- Major Sudeq Al-Suhemat, Head of Traffic System, Licenses Department
- Eng. Omar Khilifat, Traffic System, Licenses Department
- Eng. Omar Alquran, Licenses Department

### **Lebanon**

- Yarob Badr, Regional Advisor on Transport and Logistics, ESCWA
- Ramzi Salame, Sec.Gen NRSC
- Boulos Tanios, MoTPW
- Khalid A.Shmait, Head of Execution Department, MoTPW
- Abdel Hafiz El Kaissi, DG of Land and Maritime Transport, MoTPW
- Ilham El Khabbaz, DG of Land and Maritime Transport, MoTPW
- Ali Al Masri, DG of Land and Maritime Transport, MoTPW
- Rami Seeman, Managing Partner TMS Consulting
- Rayane Wehbe, TMS Consulting
- Zahira Abounohs, ESCWA
- General Antoine Zakra, ISF / Head of TMC

### **Morocco**

- Brahim Baamal, Direction du Transport Routier et de la Sécurité Routière (DTRSR) Ministère de l'Équipement, du Transport, de la Logistique et de l'Eau (METLE)
- Benacer Boulaajoul, Comité National de Prévention des Accidents de la Circulation (CNPAC)
- Ilhame Bachisse, Ministry of Health
- Saida Charkaoui, CNPAC
- Halima Lessiq Direction de la Stratégie, des programmes et de la Coordination des Transports (DSPCT), METLE
- Zahraa Ouacifi, DSPCT/METLE
- Mohamed Afechkar, DTRSR/METLE
- M. Amman, DTRSR/METLE
- Dries Salek, Direction Générale de la Sûreté Nationale (DGSN)
- Azeddine Chahidi, DTRSR/METLE
- Naima Taoudi, DTRSR/METLE
- Zakia Lhanfour, DTRSR/METLE
- Houria Machrouki, DTRSR/METLE
- Fatiha Oraiche, Centre National d'études et de Recherches Routières (CNER)
- Soumia Jannan, DSPCT/METLE
- Nouredine Didi, CNGR/DR
- Eljarkouri Said, DTRSR/METLE



## Tunisia

- Ali Fraj, General Director, DGTT
- Sayadi Nourreddine, DGTT, Traffic Director
- Hassani Montassar, General Director DGTT
- Amel Dhaoui, ATTT Director
- Ridha Bouneb, ATTT Director
- Barhoumi Ibtissem, DGSEEP
- Kemali Abdelkader, DGSEEP Director
- Ben Kheder Foued, DGTT Vice Director Safety
- Toukabri Heni, DGTT
- Abdelkader Mensi, DGTT
- Anis Ben Hassoun, ATTT
- Sana Haouari, Vice Director, Ministry of Information Technologies
- Henda Chebbi, Ministry of Health Shocroom
- Naoufel Somrani, Ministry of Health SHOC ROOM
- Ayadi Madiha FTUSA
- Bejaoui Ines, Garde Nationale de Circulation
- Baklouti Ikbél, Garde Nationale de Circulation
- Bilel Ounifi, ATPR Director
- Mohamed Amine Souguir, Vice Director, Observatory ONSR
- Ben Hammouda Ali, Ministry of Equipment
- Sami Rachikou, Police Traffic Directorate
- Cherni Sofien, Police Traffic Directorate
- Mouez Souiri, DGTT
- Foued Hanen, DGTT
- Baba Hamdi, DGTT
- Ben Hamouda lotfi, Ministry of Health
- Barhoumi Ibtissem, DGSEEP
- Arjoun Ridha, Director, Ministry of Transport