

## Terminology standardization and classification of occurrences on APCAP network

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The consistency of the information recorded on the accident database, depends on:

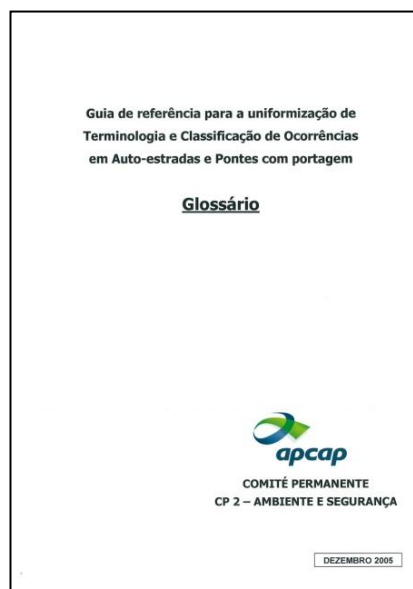
- (i) the accuracy of the data collected where and when the occurrence took place and afterwards when it is recorded in the database;
- (ii) a uniform and exhaustive data collection methodology.

In order to achieve these results, APCAP produced a Glossary to assure standard terminologies, procedures and indicators of all occurrences (accidents / incidents) to be used by the toll motorways and bridges concessionaires.

Therefore various definitions are presented and described such as: incident, accident, victims, motorway users, identification and classification of the occurrence site, classification of the area and classification of the lane. All these definitions are fundamental for the determination of the accident indicators.

Based on the principles of the Glossary, APCAP has published a Statistical Yearbook of Road Safety showing the evolution of the accidents and the consistency of the indicators. This information is used to support the safety measures decisions in the APCAP network in order to contribute to the objectives of improving the national network safety.

In the future, APCAP intends to articulate and integrate this standard terminology and classification of occurrences in a wider ASECAP universe.



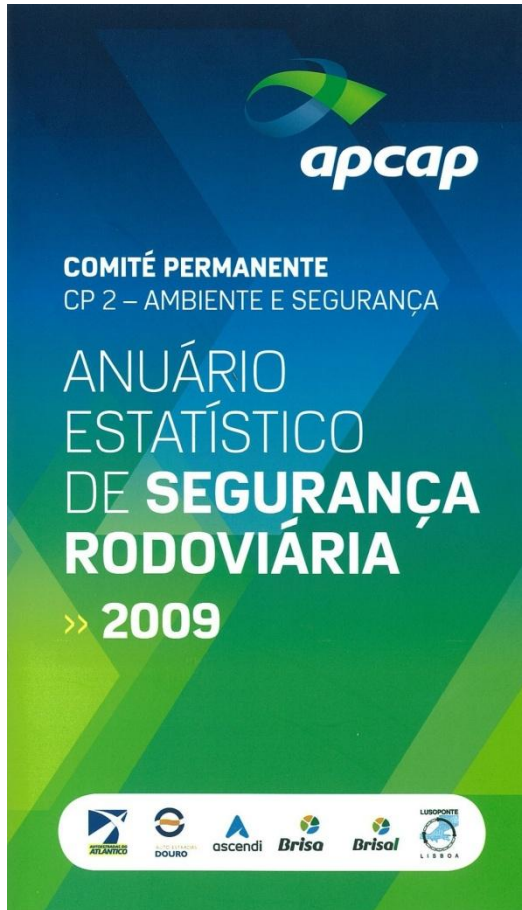
## Glossary Structure

The Glossary is divided into two main sections: A) Definitions and B) Indicators, according with the following tables:

<b>A - DEFINITIONS</b>	<b>A-1 INCIDENT</b>
	<b>A-2 ACCIDENT</b>
	A-2-1 Injury accident
	A-2-2 Fatal Accident
	A-2-3 Accident with Serious Injuries
	A-2-4 Accident with Light Injuries
	<b>A-3 INJURY</b>
	A-3-1 Dead
	A-3-2 Serious Injuries
	A-3-3 Light Injuries
	<b>A-4 ROAD USERS</b>
	A-4-1 Driver
	A-4-2 Passenger
	A-4-3 Pedestrian
	<b>A-5 IDENTIFICATION AND CLASSIFICATION OF THE OCCURRENCE SITE</b>
	A-5-1 Motorway
	A-5-2 Carriageway
	A-5-3 Lane
	A-5-4 Shoulder
	A-5-5 Accident Kilometer
	A-5-6 Time of occurrence
	A-5-7 Occurrence Direction
	<b>A-6 AREA OF OCCURRENCE CLASSIFICATION</b>
	A-6-1 Road Section
	A-6-2 Intersection Leg
	A-6-3 Toll plaza interchange access
	A-6-4 Toll plaza
	A-6-5 Road network access
	A-6-6 Service Area
	<b>A-7 LANE CLASSIFICATION</b>
A-7-1 Merging lane	
A-7-2 Diverging lane	
A-7-3 Local distributor road	
A-7-4 Automatic Lane	
A-7-5 Manual Lane	

<b>B - INDICATORS</b>	B-1	Network Length (Km)
	B-2	Kilometers Travelled ( $10^8$ Veh x Km) = $\frac{AADT \times \text{No. Km} \times \text{No. days}}{10^8}$
	B-3	Total Accidents (No.)
	B-4	Fatal Accidents (No.)
	B-5	Accidents with Serious and Light Injuries (No.)
	B-6	Accidents with Serious Injuries (No.)
	B-7	Accidents with Light Injuries (No.)
	B-8	Injury Accidents (No.)
	B-9	Only damage Accidents (No.)
	B-10	Dead (No.)
	B-11	Serious and Light Injuries (No.)
	B-12	Serious Injuries (No.)
	B-13	Light Injuries (No.)
	B-14	Accident Rate = $\frac{B 3}{B 2}$
	B-15	Fatal Accident Rate = $\frac{B 4}{B 2}$
	B-16	Serious and Light Injury Accident Rate = $\frac{B 5}{B 2}$
	B-17	Serious Injury Accident Rate = $\frac{B 6}{B 2}$
	B-18	Light Injury Accident Rate = $\frac{B 7}{B 2}$
	B-19	Injury Accident Rate = $\frac{B 8}{B 2}$
	B-20	Dead Rate = $\frac{B 10}{B 2}$
	B-21	Serious and Light Injury Rate = $\frac{B 11}{B 2}$
	B-22	Serious Injury Rate = $\frac{B 12}{B 2}$
	B-23	Light Injury Rate = $\frac{B 13}{B 2}$
	B-24	Severe Index = Number of dead per 100 injury accidents
	B-25	Black Spot = road section with up to 200 meters, where occurred at least 5 injury accidents in one year, and the sum of the severe rates is higher than 20.
	B-26	Severe Rate IG = $100 \times \text{Dead} + 10 \times \text{Serious Injuries} + 3 \times \text{Light Injuries}$

APCAP Road Safety Statistical Yearbook



Based on the principles of the Glossary, APCAP publishes a Statistical Yearbook of Road Safety showing the evolution of the accidents and the consistency of the indicators. This information is used to support the safety measures decisions in the APCAP network in order to contribute to the objectives of improving the national road network safety.

For example, the evolution of some of the most important indicators is presented in the following Figure:



Next Steps

From the APCAP successfully experience, it is considered of great importance an ASECAP Glossary taking into account all the different members' experience on these matters, in order to have an ASECAP Road Safety Statistical Yearbook.