CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Total number of road accidents (SOC_SF_SF1)

DOMAIN

Transport	Environment	Energy	**Society**	Economy

TOPIC	**Safety**	
IMPACT	**Safety during personal mobility** *Reducing the risk of injuries during urban trips*	**SOC_SF**

Category

Key indicator	Supplementary indicator	State indicator

CONTEXT AND RELEVANCE

Ensuring the safety of road users is crucial for creating sustainable and livable urban environments. This involves reducing road accidents through various measures, such as improving road design, enhancing public transportation systems, lowering speed limits on urban roads, and introducing physical separations between different modes of transport, like motorized vehicles and bicycles. These urban road safety measures help reduce the risk of injuries and fatalities associated with trips in cities. Promoting road safety is also crucial for encouraging active mobility, as pedestrians and cyclists are among the most vulnerable road users due to their lack of physical protection and greater exposure to traffic.

This indicator is the total number of road accidents (per inhabitant) occurring in the pilot area. **It is a relevant indicator when the policy action is aimed at increasing the safety of mobility. A successful action is reflected in a LOWER value of the indicator.**

DESCRIPTION

This indicator is the ratio between the reported number of accidents involving a road vehicle (including bicycles and scooters) in the pilot area and the number of inhabitants of the pilot area itself. Its unit of measurement is **event per person**.

METHOD OF CALCULATION AND INPUTS

The indicator should be calculated exogenously based on the specified inputs according to the method presented below and its value should be coded in the supporting tool.

Method	
Calculation of the indicator based on total accident data	Significance: **0.70** 

INPUTS

The following information is needed to compute the indicator:

- **Reported number of accidents involving a road vehicle in the pilot area.** The number of accidents should make reference to a period of **at least 10 weeks before the date of data collection**. This condition is relevant especially for the calculation of the indicator after the implementation of the pilot measures. In any case, the monitored period must be of the same length before and after the implementation of the pilot measures.
  The condition that accidents involve a road vehicle does not mean that accident involving pedestrians are excluded. They are relevant provided that a road vehicle (including bicycle and scooters) is also involved (e.g. a collision between a scooter and a pedestrian should be considered).
  The source of the data should be local police, which is alerted when a road accident occurs. It is acknowledged that not all accidents are reported to the local police; however, missing accidents are generally very light. The required data does not need details on the type of means involved or to the seriousness of the consequences or to the specific location where the accidents occurred.

- **Population of the pilot area**. The population is used to proportionate the number of accidents to the size of the pilot area. The source of this data should be the municipality.

METHOD OF CALCULATION

The indicator should be computed **exogenously** as the simple ratio between the reported number of accidents and the population (see equation below).

EQUATIONS

The indicator should be computed as the following ratio:

$$TotAccRatio = \frac{TotAcc}{Pop}$$

Where:

$TotAcc$ = Total number of accidents involving road vehicles in the monitored period.

Pop = Population of the pilot area.

ALTERNATIVE INDICATORS

Alternative indicators to the one described in this factsheet are **SOC_SF_SF2** and **SOC_SF_SF3**. Both are based on accident data; they are different in terms of the level of aggregation of this data. **SOC_SF_SF2** distinguishes accidents by seriousness. **SOC_SF_SF3** adds to seriousness also a segmentation by individuals' categories (e.g. pedestrian, bike drivers, etc.). Clearly, more detailed indicators are more significant. The choice of one or another is basically a matter of data availability.

A different alternative is the indicator **SOC_SF_PS1**, which measures the perceived safety of individuals. This is a different impact as perceived safety may diverge from objective safety level. Therefore, more than an alternative, this other indicator could be considered complementary. Its calculation requires to collect individual responses. This can be rather demanding if a sample survey should be organised on purpose to collect the required individual judgments on perceived safety. If a sample survey is already envisaged to collect other responses, the addition of one question does not add much complexity and makes the calculation of this indicator not complex.