








CIVITAS indicators

Reported environmental liveability (ENV_US_EL2)

DOMAIN

				
Transport	Environment	Energy	Society	Economy

TOPIC

Urban space

IMPACT

Urban environmental liveability

Increasing the liveability of the urban space

ENV_US

Category

Key indicator	Supplementary indicator	State indicator
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CONTEXT AND RELEVANCE

Context to be drafted.

This indicator provides a measure of the perceived environmental liveability of the pilot area. The environmental liveability is linked to elements like air quality, noise, green spaces, traffic, vehicle-free areas, visual impact of parked vehicles, etc. **It is a relevant indicator when the policy action is aimed at improving the environmental liveability of the pilot area, reducing negative implications of urban transport. A successful action is reflected in a HIGHER value of the indicator.**

DESCRIPTION

The indicator is a **dimensionless** score summarising the perceived level of environmental liveability reported by a sample of individuals in the pilot area.

METHOD OF CALCULATION AND INPUTS

The indicator is calculated as the average score assigned by a sample of citizens who provided responses to a question asking how liveable they perceive the pilot area environment. **The indicator should be computed exogenously**, by applying the method described and then coded in the supporting tool.

Method 1

Computing an environmental liveability score from responses collected by means of a sample survey

Significance: **0.50**



INPUTS

The following information is needed to compute the indicator:

- **Responses of a sample of individuals to a question regarding the perceived environmental liveability.**

A suggested formulation of a question regarding the perceived environmental liveability is provided in the Guidelines for surveys which are part of the MUSE Evaluation Framework.

The experiment would be reflected in terms of a different responses to the same question

METHOD OF CALCULATION

The requirement for computing the indicator is collecting the responses from a sample survey (which can be organised to collect more information than the one needed for this indicator).

Assuming that the formulation of the question suggested in the Guidelines for surveys is used, the indicator should be computed **exogenously** according to the following steps:

- **Calculation of the share of individuals assigning a certain score to the environmental liveability** (see equation below)
- **Calculation of the environmental liveability indicator** (see equation below).

EQUATIONS

The share of individuals assigning a certain score to the environmental liveability should be computed as:

$${}^l\text{LivScoreSh} = \frac{\sum_i {}^f\text{LivScore}_i \text{ where } f = l}{I}$$

Where:

${}^f\text{LivScore}_i$ = Score of environmental liveability f assigned by individual i .

I = Total number of responses collected.

For example, if a sample of 300 individuals was surveyed and 28 of them assigned an environmental liveability score of 7, $\sum_i {}^f\text{NoiseAnn}_i$ where $f = 7$ would be 28 and the share of those assigning this score would be $28 / 300 = 9\%$

The environmental liveability indicator should be computed as:

$$\text{AvPercTrNoise} = \sum_l ({}^l\text{LivScoreSh} * {}^l\text{LivScore})$$

Where:

${}^l\text{LivScore}$ = environmental liveability score l .

In the example above, the environmental liveability score l is 7.

ALTERNATIVE INDICATORS

This indicator is based on the environmental liveability reported by a sample of inhabitants of the pilot area. The significance of this indicator is good; it is based on qualitative and subjective evaluation, rather than on an objective measure, but for a multidimensional concept like liveability, a single objective measure is hard to define. The estimation of this indicator can be of limited complexity, especially if a sample survey in the pilot area is already envisaged to collect information needed for other indicators. In that case, adding one question regarding noise would be basically effortless.

An alternative indicator is ENV_NS_EL1, which consists of the combination of other indicators: ENV_PL_PF2 (polluting impact of vehicles), ENV_NS_NE2 (measured noise) and ENV_US_IP1 (shares of vehicles irregularly parked). If these other indicators are already envisaged as part of the assessment, it is straightforward computing the alternative indicator. However, if the other indicators are not envisaged, the effort for their computation is probably not lower than the effort needed to arrange a survey and compute the indicator described in this factsheet. Furthermore, the alternative indicator covers only three dimensions, which are not necessarily exhaustive of what contributes to environmental liveability. Therefore, even if the alternative indicator is based on objective measures, its level of significance is lower than the significance of the indicator described in this factsheet.

ALTERNATIVE INDICATORS

This indicator is based on personal judgments of a sample of individuals rather than on objective measures. The concept of environmental liveability is, at least partially, a matter of perception. Therefore, the use of personal judgement is only a partial limitation of the relevance of this indicator. Its calculation can be rather demanding if a sample survey should be organised on purpose to collect the required individual judgments. If a sample survey is already envisaged to collect other responses, the addition of one question on liveability does not add much complexity and makes the calculation of this indicator not complex.

An alternative indicator is ENV_US_EL1, which is built assembling other indicators referred to specific aspects affecting environmental liveability. These alternative indicators (ENV_PL_PF2 – pollution impact of vehicles; ENV_NS_NE2 – transport noise emissions; ENV_US_IP1 – transport visual impact) are based on objective elements. From this perspective are therefore more significant than the one described in this factsheet. However, the three dimensions covered by the indicators on which the alternative one is built are not all dimensions involved. Therefore, the alternative indicator is not more significant but less significant than the one described in this factsheet. At the same time, if it is envisaged to compute the three indicators on which the alternative one is based, the calculation of this one is straightforward. If even just one of the three indicators was not planned, it should be considered that all of them are somewhat complex.