

Dictionary of Variables

The databases used in the **RShiny SustainLight** application (<https://shiny.umr-tetis.fr/SustainLight/>) are included in the **.RData** file. This file contains the following databases:

- **light_pollution_indicators**
- **ecological_indicators**
- **socio_eco_indicators**
- **summary_indicators_high**
- **summary_indicators_moderate**
- **base_map_mmm**

This document describes the different variables present in these databases.

1. light_pollution_indicators

The **light_pollution_indicators** database corresponds to the data represented in the "**light pollution indicators**" tab of the application. It contains information on the level of **upward emissions**. Light pollution is estimated from satellite remote sensing using **very high-resolution RGB images** acquired from the **Jilin-1 satellite (CGsatellite)** (1m resolution) of the Montpellier Metropolitan Area in the year **2022**, on **cloud-free nights** (20 images taken over 3 nights between August and October 2022).

"level"

Description: Level of upward emissions.

Calculation Method:

- Calculation of grayscale brightness as a proxy for total radiance (Brightness) using the red, green, and blue bands as follows: $Brightness = 0.2989 \times BandR + 0.5870 \times BandG + 0.1140 \times BandB$, where BandR, BandG, and BandB are respectively the red, green, and blue radiance values in $W/m^2/sr/\mu m$, with weights assigned based on the formula from the ITU BT.601 standard (<https://www.itu.int/rec/R-REC-BT.601-7-201103-I/en>). This process generates an output image with a single band containing brightness values at 1m resolution.
- Extraction of light peaks through successive segmentations on brightness images, to identify light sources in the area and their associated radiance value.

Unit: Categorical variable: "low," "moderate," or "high."

- A "low" level corresponds to brightness ≤ 25 .
- A "moderate" level corresponds to brightness between 25 and 50.
- A "high" level corresponds to brightness > 50 .

"indice"

Description: Level of upward emissions.

Unit: Categorical variable: 0, 1, 2

- 0: low level of brightness
- 1: moderate level of brightness
- 2: high level of brightness

2. ecological_indicators

The **ecological_indicators** database corresponds to the data represented in the "**ecological indicators**" tab of the application. It includes data on various ecological indicators, both for individual species and overall: connectivity loss due to light pollution, biodiversity reservoirs, and a global score that considers all six species. The indicator type is specified by the '**type_variable**' variable, and the species by the '**species**' variable (see details below).

“species”

Description: group of species concerned by the indicator.

Unit: Categorical variable:

- “Nightjar”: European Nightjar (*Caprimulgus europaeus*)
- “Insects”: insects that depends on local habitat (Namely: *Lasiocampoidea*, *Bombycoidea*, *Drepanoidea*, *Geometroidea*, *Noctuoidea*, *Hepialoidea*, *Cossoidea*, *Tyridoidea*.)
- “Lampyridae”: Lampyridae family (e.g., fireflies and glowworms)
- “Murine”: *Myotis sp* (bat)
- “Rhinolophus”: *Rhinolophus sp* (bat)
- “Amphibian”: a group of amphibian species (*Pelodytes sp*, *Pelobates sp*, *Epidalea calamita*)
- “global”: global score (considering the six groups of species)

“type_variable”

Description: type of indicator.

Unit: Categorical variable:

- “impact_light_pollution”: impact of light pollution on dispersion according to ecological stakes without light pollution
- “rb”: biodiversity reservoir
- “global_score”: global score
- “priority_area”: priority areas for light pollution mitigation policies

“baseline_ecological_stakes”

Description: baseline ecological stakes (i.e. ecological stakes without light pollution) for each group of species.

Calculation Method:

- Identification of biodiversity reservoirs thanks to local naturalist experts.
- Inclusion of presence data (using inventories data) for the target species group when available, to correct for the fact that the distribution of a species in a landscape does not depend solely on the presence of favorable habitats.

- Least cost process modelling to define connectivity and biological corridors. This process defines landscape resistance maps based on the landscape resistance to movement between reservoirs. It is made first without considering light pollution, by considering only landscape variables (e.g., distance from buildings, topography, etc.)

Unit: Categorical variable:

- 2: areas with high ecological stakes, i.e. that include the species' reservoirs (i.e. areas in which species can complete all or part of their life cycle and where natural habitats can ensure them to maintain a sufficient population size) and main corridors.
- 3: areas with moderate ecological stakes, i.e. that only contains secondary corridors.

"loss_connectivity"

Description: loss of connectivity implied by light pollution. Connectivity loss is defined as the variation of dispersion due to light pollution.

Calculation Method:

- Identification of biodiversity reservoirs thanks to local naturalist experts.
- Inclusion of presence data (using inventories data) for the target species group when available, to correct for the fact that the distribution of a species in a landscape does not depend solely on the presence of favorable habitats.
- Least cost process modelling to define connectivity and biological corridors. This process defines landscape resistance maps based on the landscape resistance to movement between reservoirs. It is made first without considering light pollution, by considering only landscape variables (e.g., distance from buildings, topography, etc.), and further by considering the specific impact of light pollution.
- Variation of dispersion due to light pollution is the difference between the connectivity without considering the effect of light pollution, and the connectivity considering the effect of light pollution.

Unit: Categorical variable:

- "Strong": strong loss of connectivity: positive variation, above the median loss observed in the entire territory.
- "Moderate": moderate loss of connectivity: positive variation, below the median loss observed in the entire territory.

"impacted_species"

Description: Number of groups of species impacted by the loss of connectivity. Relevant for global scores only.

Unit: Categorical variable:

- "1 to 2": one to two groups of species impacted
- "3 to 6": three to six groups of species impacted

"indicator"

Description: Value of the indicator. Since the value of this variable depends on the type of indicator, we detail it in table below.

Type_variable	Species or global?	Value of the indicator	Description
impact_light_pollution	Species	21	High ecological stake without light pollution (impact_light_pollution = 2) and strong loss of connectivity
		22	High ecological stake without light pollution (impact_light_pollution = 2) and moderate loss of connectivity
		31	Moderate ecological stake without light pollution (impact_light_pollution = 3) and strong loss of connectivity
		32	Moderate ecological stake without light pollution (impact_light_pollution = 3) and moderate loss of connectivity
rb	Species	1	Reservoirs unaffected by light pollution
		2	Reservoirs affected by light pollution
global_score & priority_area	Global	211	High ecological stake without light pollution (impact_light_pollution = 2) strong loss of connectivity, 3 to 6 groups of species impacted
		212	High ecological stake without light pollution (impact_light_pollution = 2) strong loss of connectivity, 1 to 2 groups of species impacted
		221	High ecological stake without light pollution (impact_light_pollution = 2) moderate loss of connectivity, 3 to 6 groups of species impacted

		222	High ecological stake without light pollution (impact_light_pollution = 2) moderate loss of connectivity, 1 to 2 groups of species impacted
		311	Moderate ecological stake without light pollution (impact_light_pollution = 2) strong loss of connectivity, 3 to 6 groups of species impacted
		312	Moderate ecological stake without light pollution (impact_light_pollution = 2) strong loss of connectivity, 1 to 2 groups of species impacted
		321	Moderate ecological stake without light pollution (impact_light_pollution = 2) moderate loss of connectivity, 3 to 6 groups of species impacted
		322	Moderate ecological stake without light pollution (impact_light_pollution = 2) moderate loss of connectivity, 1 to 2 groups of species impacted

“legend”

Description: legend as indicated in the shiny app.

3. socio_eco_indicators

The **socio_eco_indicators** database corresponds to the data represented in the "**socio-economic indicators**" tab of the application. It includes data the social acceptability score of light extinction from 1 a.m. to 5 a.m. and of light extinction from 11 p.m. to 6 a.m, for each infra-municipal units (“IRIS”).

“LIBCOM”

Description: name of the municipality

“IRIS”

Description: identification number of the IRIS

“LIBIRIS”

Description: name of the IRIS

“acceptability_score_extinction1”

Description: social acceptability score for light extinction from 1 a.m. to 5 a.m.

Calculation Method:

- Discrete Choice Experiment (DCE) conducted in 2021, surveying 1,148 citizens of the Montpellier Metropolitan Area (MMA) on public lighting changes, including light extinction. See Beaudet et al. 2022 for more details.
- Analysis of preferences using a Random Parameter Logit (RPL) on the whole sample of the MMA. The RPL allows to integrate interactions between mitigation measures and spatial or socio-demographic variables.
- Spatial mapping of preferences: the results of the RPL gives a function of preferences for extinction from 1 a.m. to 5 a.m. that depends on socio-economic characteristics. We applied this function to each spatial unit (IRIS) using data from the general census. See Beaudet et al. 2025 and Tardieu et al. 2025 for more details.
- The prediction is a willingness to pay (in euro) for extinction from 1 a.m. to 5 a.m. and can be interpreted as an average acceptability score for the measure.

Unit: numerical variable, in € (positive or negative)

- A positive value indicates a positive acceptability score for the measure.
- A negative value indicated a negative acceptability score for the measure.

“acceptability_score_extinction2”

Description: social acceptability score for light extinction from 11 p.m. to 6 a.m.

Calculation Method:

- Discrete Choice Experiment (DCE) conducted in 2021, surveying 1,148 citizens of the Montpellier Metropolitan Area (MMA) on public lighting changes, including light extinction. See Beaudet et al. 2022 for more details.
- Analysis of preferences using a Random Parameter Logit (RPL) on the whole sample of the MMA. The RPL allows to integrate interactions between mitigation measures and spatial or socio-demographic variables.
- Spatial mapping of preferences: the results of the RPL gives a function of preferences for extinction from 11 p.m. to 6 a.m. that depends on socio-economic characteristics. We applied

this function to each spatial unit (IRIS) using data from the general census. See Beaudet et al. 2025 and Tardieu et al. 2025 for more details.

- The prediction is a willingness to pay (in euro) for extinction from 11 p.m. to 6 a.m. and can be interpreted as an average acceptability score for the measure.

Unit: numerical variable, in € (positive or negative)

- A positive value indicates a positive acceptability score for the measure.
- A negative value indicated a negative acceptability score for the measure.

“cat_acceptability_score_extinction1”

Description: category of social acceptability for light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable

- “Very opposed”: social acceptability score for extinction from 1 a.m. to 5 a.m. below -20
- “Opposed”: social acceptability score for extinction from 1 a.m. to 5 a.m. between -20 and -5
- “Little concerned”: social acceptability score for extinction from 1 a.m. to 5 a.m. between -5 and 5
- “Rather favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. between 5 and 15
- “Favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. between 15 and 30
- “Very favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. above 30

“cat_acceptability_score_extinction2”

Description: category of social acceptability for light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable

- “Very opposed”: social acceptability score for extinction from 11 p.m. to 6 a.m. below -20
- “Opposed”: social acceptability score for extinction from 11 p.m. to 6 a.m. between -20 and -5
- “Little concerned”: social acceptability score for extinction from 11 p.m. to 6 a.m. between -5 and 5
- “Rather favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. between 5 and 15
- “Favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. between 15 and 30
- “Very favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. above 30

4. summary_indicators_high

The **summary_indicators_high** database contains the data displayed in the "Summary Maps" tab of the application. It provides information on social acceptability scores, ecological stakes, and the intersection between the two. This database focuses exclusively on areas with high baseline ecological stakes—i.e. areas with high ecological stakes without light pollution. In contrast, areas with moderate ecological stakes are documented in the **summary_indicators_moderate** database.

“LIBCOM”

Description: name of the municipality

“IRIS”

Description: identification number of the IRIS

“LIBIRIS”

Description: name of the IRIS

“acceptability_score_extinction1”

Description: social acceptability score for light extinction from 1 a.m. to 5 a.m.

Calculation Method:

- Discrete Choice Experiment (DCE) conducted in 2021, surveying 1,148 citizens of the Montpellier Metropolitan Area (MMA) on public lighting changes, including light extinction. See Beaudet et al. 2022 for more details.
- Analysis of preferences using a Random Parameter Logit (RPL) on the whole sample of the MMA. The RPL allows to integrate interactions between mitigation measures and spatial or socio-demographic variables.
- Spatial mapping of preferences: the results of the RPL gives a function of preferences for extinction from 1 a.m. to 5 a.m. that depends on socio-economic characteristics. We applied this function to each spatial unit (IRIS) using data from the general census. See Beaudet et al. 2025 and Tardieu et al. 2025 for more details.
- The prediction is a willingness to pay (in euro) for extinction from 1 a.m. to 5 a.m. and can be interpreted as an average acceptability score for the measure.

Unit: numerical variable, in € (positive or negative)

- A positive value indicates a positive acceptability score for the measure.
- A negative value indicated a negative acceptability score for the measure.

“acceptability_score_extinction2”

Description: social acceptability score for light extinction from 11 p.m. to 6 a.m.

Calculation Method:

- Discrete Choice Experiment (DCE) conducted in 2021, surveying 1,148 citizens of the Montpellier Metropolitan Area (MMA) on public lighting changes, including light extinction. See Beaudet et al. 2022 for more details.
- Analysis of preferences using a Random Parameter Logit (RPL) on the whole sample of the MMA. The RPL allows to integrate interactions between mitigation measures and spatial or socio-demographic variables.
- Spatial mapping of preferences: the results of the RPL gives a function of preferences for extinction from 11 p.m. to 6 a.m. that depends on socio-economic characteristics. We applied

this function to each spatial unit (IRIS) using data from the general census. See Beaudet et al. 2025 and Tardieu et al. 2025 for more details.

- The prediction is a willingness to pay (in euro) for extinction from 11 p.m. to 6 a.m. and can be interpreted as an average acceptability score for the measure.

Unit: numerical variable, in € (positive or negative)

- A positive value indicates a positive acceptability score for the measure.
- A negative value indicated a negative acceptability score for the measure.

“index_acceptability_score_extinction1”

Description: index for the social acceptability score of light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable:

- 1: social acceptability score for extinction from 1 a.m. to 5 a.m. below – 5
- 2: social acceptability score for extinction from 1 a.m. to 5 a.m. between -5 and 5
- 3: social acceptability score for extinction from 1 a.m. to 5 a.m. between 5 and 30
- 4: social acceptability score for extinction from 1 a.m. to 5 a.m. above 30

“index_acceptability_score_extinction2”

Description: index for the social acceptability score of light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable:

- 1: social acceptability score for extinction from 11 p.m. to 6 a.m. below – 5
- 2: social acceptability score for extinction from 11 p.m. to 6 a.m. between -5 and 5
- 3: social acceptability score for extinction from 11 p.m. to 6 a.m. between 5 and 30
- 4: social acceptability score for extinction from 11 p.m. to 6 a.m. above 30

“cat_acceptability_score_extinction1”

Description: category of social acceptability for light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable

- “Very opposed”: social acceptability score for extinction from 1 a.m. to 5 a.m. below – 5
- “Little concerned”: social acceptability score for extinction from 1 a.m. to 5 a.m. between -5 and 5
- “Favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. between 5 and 30
- “Very favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. above 30

“cat_acceptability_score_extinction2”

Description: category of social acceptability for light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable

- “Very opposed”: social acceptability score for extinction from 11 p.m. to 6 a.m. below – 5
- “Little concerned”: social acceptability score for extinction from 11 p.m. to 6 a.m. between -5 and 5
- “Favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. between 5 and 30
- “Very favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. above 30

“loss_connectivity”

Description: loss of connectivity implied by light pollution. Connectivity loss is defined as the variation of dispersion due to light pollution.

Calculation Method:

- Identification of biodiversity reservoirs thanks to local naturalist experts.
- Inclusion of presence data (using inventories data) for the target species group when available, to correct for the fact that the distribution of a species in a landscape does not depend solely on the presence of favorable habitats.
- Least cost process modelling to define connectivity and biological corridors. This process defines landscape resistance maps based on the landscape resistance to movement between reservoirs. It is made first without considering light pollution, by considering only landscape variables (e.g., distance from buildings, topography, etc.), and further by considering the specific impact of light pollution.
- Variation of dispersion due to light pollution is the difference between the connectivity without considering the effect of light pollution, and the connectivity considering the effect of light pollution.

Unit: Categorical variable:

- “Strong”: strong loss of connectivity: positive variation, above the median loss observed in the entire territory.
- “Moderate”: moderate loss of connectivity: positive variation, below the median loss observed in the entire territory.

“impacted_species”

Description: Number of groups of species impacted by the loss of connectivity. Relevant for global scores only.

Unit: Categorical variable:

- “1 to 2”: one to two groups of species impacted
- “3 to 6”: three to six groups of species impacted

“index_ecological_stake”

Description: index for the ecological stakes.

Unit: Categorical variable:

- 1: moderate loss of connectivity and 1 to 2 groups of species impacted
- 2: moderate loss of connectivity and 3 to 6 groups of species impacted
- 3: strong loss of connectivity and 1 to 2 groups of species impacted
- 4: strong loss of connectivity and 3 to 6 groups of species impacted

“indicator_extinction1”

Description: indicator for the bivariate maps of ecological stakes (high baseline ecological stakes) and social acceptation for light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable: the first number corresponds to the variable index_ecological_stake and the second to index_acceptability_score_extinction1.

“indicator_extinction2”

Description: indicator for the bivariate maps of ecological stakes (high baseline ecological stakes) and social acceptation for light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable: the first number corresponds to the variable index_ecological_stake and the second to index_acceptability_score_extinction2.

5. summary_indicators_moderate

The **summary_indicators_moderate** database contains the data displayed in the "Summary Maps" tab of the application. It provides information on social acceptability scores, ecological stakes, and the intersection between the two. This database focuses exclusively on areas with moderate baseline ecological stakes—i.e. areas with moderate ecological stakes without light pollution. In contrast, areas with high ecological stakes are documented in the **summary_indicators_high** database.

“LIBCOM”

Description: name of the municipality

“IRIS”

Description: identification number of the IRIS

“LIBIRIS”

Description: name of the IRIS

“acceptability_score_extinction1”

Description: social acceptability score for light extinction from 1 a.m. to 5 a.m.

Calculation Method:

- Discrete Choice Experiment (DCE) conducted in 2021, surveying 1,148 citizens of the Montpellier Metropolitan Area (MMA) on public lighting changes, including light extinction. See Beaudet et al. 2022 for more details.
- Analysis of preferences using a Random Parameter Logit (RPL) on the whole sample of the MMA. The RPL allows to integrate interactions between mitigation measures and spatial or socio-demographic variables.
- Spatial mapping of preferences: the results of the RPL gives a function of preferences for extinction from 1 a.m. to 5 a.m. that depends on socio-economic characteristics. We applied this function to each spatial unit (IRIS) using data from the general census. See Beaudet et al. 2025 and Tardieu et al. 2025 for more details.
- The prediction is a willingness to pay (in euro) for extinction from 1 a.m. to 5 a.m. and can be interpreted as an average acceptability score for the measure.

Unit: numerical variable, in € (positive or negative)

- A positive value indicates a positive acceptability score for the measure.
- A negative value indicated a negative acceptability score for the measure.

“acceptability_score_extinction2”

Description: social acceptability score for light extinction from 11 p.m. to 6 a.m.

Calculation Method:

- Discrete Choice Experiment (DCE) conducted in 2021, surveying 1,148 citizens of the Montpellier Metropolitan Area (MMA) on public lighting changes, including light extinction. See Beaudet et al. 2022 for more details.
- Analysis of preferences using a Random Parameter Logit (RPL) on the whole sample of the MMA. The RPL allows to integrate interactions between mitigation measures and spatial or socio-demographic variables.
- Spatial mapping of preferences: the results of the RPL gives a function of preferences for extinction from 11 p.m. to 6 a.m. that depends on socio-economic characteristics. We applied this function to each spatial unit (IRIS) using data from the general census. See Beaudet et al. 2025 and Tardieu et al. 2025 for more details.
- The prediction is a willingness to pay (in euro) for extinction from 11 p.m. to 6 a.m. and can be interpreted as an average acceptability score for the measure.

Unit: numerical variable, in € (positive or negative)

- A positive value indicates a positive acceptability score for the measure.
- A negative value indicated a negative acceptability score for the measure.

“index_acceptability_score_extinction1”

Description: index for the social acceptability score of light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable:

- 1: social acceptability score for extinction from 1 a.m. to 5 a.m. below – 5

- 2: social acceptability score for extinction from 1 a.m. to 5 a.m. between -5 and 5
- 3: social acceptability score for extinction from 1 a.m. to 5 a.m. between 5 and 30
- 4: social acceptability score for extinction from 1 a.m. to 5 a.m. above 30

“index_acceptability_score_extinction2”

Description: index for the social acceptability score of light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable:

- 1: social acceptability score for extinction from 11 p.m. to 6 a.m. below – 5
- 2: social acceptability score for extinction from 11 p.m. to 6 a.m. between -5 and 5
- 3: social acceptability score for extinction from 11 p.m. to 6 a.m. between 5 and 30
- 4: social acceptability score for extinction from 11 p.m. to 6 a.m. above 30

“cat_acceptability_score_extinction1”

Description: category of social acceptability for light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable

- “Very opposed”: social acceptability score for extinction from 1 a.m. to 5 a.m. below – 5
- “Little concerned”: social acceptability score for extinction from 1 a.m. to 5 a.m. between -5 and 5
- “Favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. between 5 and 30
- “Very favourable”: social acceptability score for extinction from 1 a.m. to 5 a.m. above 30

“cat_acceptability_score_extinction2”

Description: category of social acceptability for light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable

- “Very opposed”: social acceptability score for extinction from 11 p.m. to 6 a.m. below – 5
- “Little concerned”: social acceptability score for extinction from 11 p.m. to 6 a.m. between -5 and 5
- “Favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. between 5 and 30
- “Very favourable”: social acceptability score for extinction from 11 p.m. to 6 a.m. above 30

“loss_connectivity”

Description: loss of connectivity implied by light pollution. Connectivity loss is defined as the variation of dispersion due to light pollution.

Calculation Method:

- Identification of biodiversity reservoirs thanks to local naturalist experts.

- Inclusion of presence data (using inventories data) for the target species group when available, to correct for the fact that the distribution of a species in a landscape does not depend solely on the presence of favorable habitats.
- Least cost process modelling to define connectivity and biological corridors. This process defines landscape resistance maps based on the landscape resistance to movement between reservoirs. It is made first without considering light pollution, by considering only landscape variables (e.g., distance from buildings, topography, etc.), and further by considering the specific impact of light pollution.
- Variation of dispersion due to light pollution is the difference between the connectivity without considering the effect of light pollution, and the connectivity considering the effect of light pollution.

Unit: Categorical variable:

- “Strong”: strong loss of connectivity: positive variation, above the median loss observed in the entire territory.
- “Moderate”: moderate loss of connectivity: positive variation, below the median loss observed in the entire territory.

“impacted_species”

Description: Number of groups of species impacted by the loss of connectivity. Relevant for global scores only.

Unit: Categorical variable:

- “1 to 2”: one to two groups of species impacted
- “3 to 6”: three to six groups of species impacted

“index_ecological_stake”

Description: index for the ecological stakes.

Unit: Categorical variable:

- 1: moderate loss of connectivity and 1 to 2 groups of species impacted
- 2: moderate loss of connectivity and 3 to 6 groups of species impacted
- 3: strong loss of connectivity and 1 to 2 groups of species impacted
- 4: strong loss of connectivity and 3 to 6 groups of species impacted

“indicator_extinction1”

Description: indicator for the bivariate maps of ecological stakes (moderate baseline ecological stakes) and social acceptance for light extinction from 1 a.m. to 5 a.m.

Unit: Categorical variable: the first number corresponds to the variable index_ecological_stake and the second to index_acceptability_score_extinction1.

“indicator_extinction2”

Description: indicator for the bivariate maps of ecological stakes (moderate baseline ecological stakes) and social acceptation for light extinction from 11 p.m. to 6 a.m.

Unit: Categorical variable: the first number corresponds to the variable `index_ecological_stake` and the second to `index_acceptability_score_extinction2`.

6. base_map_mmm

The database **base_map_mmm** contains the polygons corresponding to the borders of the municipalities of the Montpellier Metropolitan Area. It contains the variable "codcomm", the code of the municipality, and "nom", the name of the municipality.