

INSTITUTO NACIONAL DE ESTADISTICA



Rural Tourism Accommodation Occupancy Survey (EOTR)

Methodology

Year 2025

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1 Presentation

This publication presents the methodology for the Rural Tourism Accommodation Occupancy Survey.

The most important information from the survey is provided on a monthly basis, in accordance with INE dissemination rules.

The data provided reflects the two aspects considered in the tourism study: on the demand side, it offers information on travellers, overnight stays, and average stay, distributed by country of residence for non-resident travellers or by Autonomous Community of origin for Spanish travellers; on the supply side, it provides the estimated number of open establishments, estimated capacity, estimated rooms, occupancy rates, and information on employment in the sector.

This information is offered monthly on a national level, by Autonomous Community, provinces, areas and points with the highest number of overnight stays.

The National Statistics Institute would like to thank all the professionals, businesspeople and organisations related to the tourist industry for their collaboration, which is absolutely essential for conducting this survey.

2 Objectives

The main objective of the Tourist Accommodation Occupancy Survey (Rural Tourism Accommodation) is to ascertain the behaviour of a series of variables that make it possible to describe the fundamental characteristics of this type of tourist accommodation, from the viewpoint of both supply and demand, thus meeting the needs for knowledge regarding the sector by National Institutions and the requirements of International Organisations.

3 Statistical Unit

All Rural Tourism Accommodation registered as such in the corresponding register of each Autonomous Community in accordance with the definitions of such accommodation in the different Autonomous Community legal regulations.

Rural Tourism Accommodation are those establishments or dwellings intended for tourist accommodation at a price with or without other complementary services and which are registered in the corresponding Register of each Autonomous Community. These establishments usually have certain characteristics:

1. Be located in rural areas.
2. They must be buildings with an architectural typology typical of the area or be located on farms that maintain active agricultural holdings (agrotourism).
3. Offer a limited number of beds and rooms for guest accommodation and meet certain basic infrastructure and facilities requirements.

Rural tourism accommodation can adopt one or both of these two rental modalities:

- Full-use rental is defined as the entire rental of the property for the exclusive use of the contracting party,

- Shared-use rental is defined as the individualised hiring of rooms within the family dwelling itself.

4 Scope of the Survey

All rural tourism accommodations across the country are being investigated, with the exception of Ceuta and Melilla, where there are no such establishments.

5 Definition of Variables

5.1 ESTIMATED OPEN RURAL TOURISM ACCOMMODATION

Number of rural tourism accommodations open seasonally estimated by the survey.

Rural tourism accommodation open seasonally is defined as accommodation in which the reference month falls within its opening period.

5.2 ESTIMATED NUMBER OF BED-PLACES IN RURAL TOURISM ACCOMMODATION

Number of bed-places estimated by the survey of rural tourism accommodations open during the season.

The number of bed-places in a rural tourism accommodation is defined as the number of permanent beds available; therefore, extra beds are not included, and double beds are used for two beds.

5.3 TRAVELLERS CHECKED IN

All persons who stay overnight for one or more consecutive nights in the same accommodation.

Travellers are classified by their place of residence. In the case of Spanish residents, information is requested about their Autonomous City/Community of residence.

5.4 OVERNIGHT STAYS OR OCCUPIED BED-PLACES

An overnight stay or occupied bed-place is understood to be each night that a traveller stays in the rural tourism establishment.

As with travellers checked in, the occupied bed-places are itemised according to the place of residence.

5.5 AVERAGE STAY

This variable is an approximation of the average number of days travellers spend in rural tourism accommodations and is calculated as the ratio of overnight stays to the number of travellers.

5.6 OCCUPANCY RATE BY BED-PLACES

Relationship, as a percentage, between the average daily number of rooms occupied in the month and the total number of rooms available in the same period.

5.7 OCCUPANCY RATE BY BED-PLACES

Relationship, as a percentage, between the total number of overnight stays and the product of the bed-places, including spare beds, by the number of days considered in the overnight stays.

From this definition, it follows that a rural tourism accommodation may have an occupancy rate of less than 100% and yet not have any vacant bed-places, since an establishment or a room or double bed may be occupied by only one person, resulting in a single overnight stay, and yet the accommodation or room may have a greater capacity.

5.8 WEEKEND OCCUPANCY RATE BY BED-PLACES

The percentage ratio between overnight stays on Fridays and Saturdays within the reference month and the product of available places, including extra beds, and the number of days covered by the overnight stays.

5.9 EXTRA BEDS

Extra beds are defined as all beds that are not fixed and are not included in the officially declared bed-places of the establishment as listed in the directory.

Furniture that is permanently located in rural tourism accommodation (sofa beds, etc.) is only counted as an extra bed when it is actually used as such.

Cots will also be considered extra beds.

5.10 STAFF EMPLOYED

Defined as the set of people, paid or unpaid, who contribute by means of their work, to the production of goods and services during the survey reference period, even though they may work outside the premises.

5.11 TOURIST RESORT

Municipality with a significant tourist offering concentration.

5.12 TOURIST AREA

Group of municipalities where the tourist influx is specially focused. Information is provided on the main areas of tourist interest.

In the document [List of municipalities comprising each tourist area](#), the main areas of tourist interest are attached, together with the municipalities that make up these areas.

6 Survey Framework and Sample Design

The directories of the Tourism Departments of the Autonomous Communities and other auxiliary sources are used as a framework for selecting reporting units. These directories contain, among other things, the following data for each establishment: name, address, normal opening period, number of beds, number of rooms, type of establishment, and, in some cases, category. These directories are continuously updated.

The survey's sample design is based on stratified random sampling where the strata are defined by the intersection of province (or island), modality and size group. The stratification variable 'size group' is included in the survey design for the first time in 2025. Its aim is to achieve greater homogeneity among establishments based on the number of bed-places or capacity.

To form these size groups, the square root cumulative rule of the frequency distribution was applied (see Cochran 1977). This rule divides the establishments in each set formed by the province (or island) × modality intersection into two subsets, so that the first contains the establishments with the lowest capacity and the second contains those with the highest capacity.

When the number of establishments in the directory per province (or island) × modality is less than 10, the previous rule does not apply.

The establishments that are studied exhaustively, and therefore belong to the sample with probability 1, are those of modalities 6 and 7 and the relevant ones with great capacity within each crossing province(island)-modality.

For the calculation of the sample size, an optimal allocation has been applied, requiring pre-established sampling errors from the stratified estimator of the total number of bed-places of 2% by province (or island) and 3% by province (or island) × modality.

The minimum sample size required in each strata: province×modality×size group, is 5 establishments.

The definition of the sub-strata as well as the sampling fractions are detailed in the document [Sampling fractions](#). This document also details the existing modalities, as well as the types identified in each Autonomous Community (in the sheets *Description of modalities* and *Types by Autonomous Community* respectively).

The sample is selected within each strata in a systematic manner. The sample is renewed every month with the addition of new establishments. The establishments belonging to the sample are maintained for 4 years, with approximately 25% being renewed (this applies to the sample strata only).

7 Estimators

The **variables** used in the Rural Tourism Accommodation Occupancy Survey are the following:

- E = no. of establishments listed in the directory that are open in the month
- e = no. of establishments that respond to the survey using the usual questionnaire method (incidences 1 and 2)
- c = no. of establishments in the sample that are closed within their opening period (incidence 3)
- D = no. of days in the reference month (28, 29, 30, 31)
- D^{fs} = no. of Fridays and Saturdays in the reference month
- dm = no. of days that the establishment has been open in the reference month
- P = no. of bed-places in open establishments, according to the directory
- V = no. of travellers checked in
- N = no. of occupied bed-places or overnight stays
- N' = no. of extra places occupied
- ES = average stay
- T = employed staff
- H = no. of rooms in open establishments, according to the directory
- B = no. of occupied rooms (when the rental mode is not full use)
- BC = no. of occupied rooms (when the rental mode is not shared use)
- BT = total number of occupied rooms
- A = no. of independent accommodations in open establishments according to the directory
- AB = no. of occupied independent accommodations
- GP = occupancy rate per bed-places
- GH = occupancy rate per room

The **subscripts** used are:

- i = establishment
- j = province
- k = category of accommodation (rural hotel, rural apartment, rural house, active tourism, large buildings, others)

- t = size
- m = modality (place of residence, professional status)

The estimators are as follows:

1. Estimated number of establishments open for the month

$$\hat{E}_{jkt} = E_{jkt} \frac{\left(\sum_{i=1}^{e_{jkt}} \frac{dm_{ijkt}}{D} \right)}{e_{jkt} + c_{jkt}}$$

2. Estimated number of bed-places of establishments open in the month

$$\hat{P}_{jkt} = \sum_{i=1}^{E_{jkt}} P_{ijkt} \cdot \frac{\left(\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D} \right)}{\sum_{i=1}^{e_{jkt}} P_{ijkt} + \sum_{i=1}^{c_{jkt}} P_{ijkt}}$$

3. Estimated number of arriving travellers during the month, by place of residence m

$$\hat{V}_{jktm} = \left[\sum_{i=1}^{e_{jkt}} V_{ijktm} \right] \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

4. Estimated number of occupied bed-places or overnight stays, by place of residence m

$$\hat{N}_{jktm} = \left[\sum_{i=1}^{e_{jkt}} N_{ijktm} \right] \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

5. Estimated number of occupied extra bed-places

$$\hat{N}'_{jkt} = \left[\sum_{i=1}^{e_{jkt}} N'_{ijkt} \right] \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

6. Estimated number of overnight stays at the weekend

$$\hat{N}_{jkt}^{fs} = \left[\sum_{i=1}^{e_{jkt}} N_{ijkt}^{fs} \right] \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

Note: as the questionnaire does not include information on the number of extra bed-places occupied during the weekend (N_{ijk}^{fs}), the following hypothesis is used:

$$\frac{N'_{ijkt}}{N_{ijkt}} = \frac{N_{ijkt}^{fs}}{N_{ijkt}^{fs}} \Rightarrow N'_{ijkt} = N_{ijkt}^{fs} \cdot \frac{N'_{ijkt}}{N_{ijkt}}$$

7. Estimated number of occupied bed-places on weekends

$$\hat{N}'_{jkt}{}^{fs} = \left(\sum_{i=1}^{e_{jkt}} N'_{ijkt}{}^{fs} \cdot \frac{D^{fs}}{2} \right) \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

8. Estimated average stay

a) Average stay by province/island and modality

$$E\hat{S}_{jk} = \frac{\sum_t \sum_m \hat{N}_{jktm}}{\sum_t \sum_m \hat{V}_{jktm}}$$

b) Average stay by province and place of residence m

$$E\hat{S}_{jm} = \frac{\sum_k \sum_t \hat{N}_{jktm}}{\sum_k \sum_t \hat{V}_{jktm}}$$

9. Estimated staff employed

$$\hat{T}_{jktm} = \left(\sum_{i=1}^{e_{jkt}} T_{ijktm} + \right) \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

10. Estimated number of existing rooms in open establishments

The total number of rooms in an establishment is defined as follows:

$$H_{ijkt} = \begin{cases} H_{ijkt} & \text{si se conoce el n}^\circ \text{ de habitaciones del establecimiento} \\ P_{ijkt}/2 & \text{si no se conoce el n}^\circ \text{ de habitaciones del establecimiento} \end{cases}$$

$$\hat{H}_{jkt} = \sum_{i=1}^{E_{jkt}} H_{ijkt} \cdot \frac{\left(\sum_{i=1}^{e_{jkt}} H_{ijkt} \cdot \frac{dm_{ijkt}}{D} \right)}{\sum_{i=1}^{e_{jkt}} H_{ijkt} + \sum_{i=1}^{c_{jkt}} H_{ijkt}}$$

11. Estimated number of occupied rooms of establishments that have not had only full occupancy in full rental mode

$$\hat{B}_{jkt} = \left[\sum_{i=1}^{e_{jkt}} B_{ijkt} \right] \cdot \frac{\hat{H}_{jkt}}{\sum_{i=1}^{e_{jkt}} H_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

Note: Establishments that have only been occupied on a full rental basis are not taken into account in B_{ijkt} .

12. Estimated number of occupied independent accommodations and occupied rooms of establishments that have not only had occupancy in shared rental mode

$$\widehat{AB}_{jkt} = \left(\sum_{i=1}^{e_{jkt}} AB_{ijkt} \right) \cdot \frac{\widehat{E}_{jkt}}{\sum_{i=1}^{e_{jkt}} \frac{dm_{ijkt}}{D}}$$

$$\widehat{BC}_{jkt} = \left(\sum_{i=1}^{e_{jkt}} AB_{ijkt} \cdot \frac{H_{ijkt}}{A_{ijkt}} \right) \cdot \frac{\widehat{H}_{jkt}}{\sum_{i=1}^{e_{jkt}} H_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

Total occupied rooms

$$\widehat{BT}_{jkt} = \widehat{B}_{jkt} + \widehat{BC}_{jkt}$$

13. Estimated occupancy rate

- a) Occupancy rate by bed-places

$$\widehat{GP}_{jkt} = \frac{\widehat{N}_{jkt}}{D \cdot \widehat{P}_{jkt} + \widehat{N}'_{jkt}} \cdot 100$$

For the total of the province/island

$$\widehat{GP}_j = \frac{\sum_k \sum_t \widehat{GP}_{jkt} \cdot \widehat{P}_{jkt}}{\sum_k \sum_t \widehat{P}_{jkt}}$$

- b) Weekend occupancy rate by bed-places

$$\widehat{GP}_{jkt}^{fs} = \frac{\widehat{N}_{jkt}^{fs}}{D^{fs} \cdot \widehat{P}_{jkt} + \widehat{N}'_{jkt}^{fs}} \cdot 100$$

For the total of the province/island

$$\widehat{GP}_j^{fs} = \frac{\sum_k \sum_t \widehat{GP}_{jkt}^{fs} \cdot \widehat{P}_{jkt}}{\sum_k \sum_t \widehat{P}_{jkt}}$$

- c) Occupancy rate by rooms

$$\widehat{GH}_{jkt} = \frac{\widehat{BT}_{jkt}}{D \cdot \widehat{H}_{jkt}} \cdot 100$$

For the total of the province/island

$$\widehat{GH}_j = \frac{\sum_k \sum_t \widehat{GH}_{jkt} \cdot \widehat{H}_{jkt}}{\sum_k \sum_t \widehat{H}_{jkt}}$$

8 Information Collection

The basic data on rural tourism accommodations refer to a period of one month.

The information is provided monthly by rural tourism establishments to the National Statistics Institute via questionnaire. It is also possible to submit the information via electronic transmission by uploading an XML file or through an Internet connection using the IRIA system, by directly filling in the questionnaire on the screen.

9 Dissemination of Information

The information is presented at different levels of geographical disaggregation: national, autonomous community, provincial, zones and tourist resorts.

The areas (set of municipalities) have been considered, as well as the municipalities in which the tourist influx is specifically located.

Provisional results for a reference month are published around the 30th of the following month.

10 Statistical secret

Information can be given on all the strata (or geographical data groupings) in which the number of establishment with incidence 1 (open with activity) is the same or above 3.

11 Coefficients of variation

The coefficients of variation or relative sampling errors are calculated and published for the estimators for total travellers checked in during the month, \hat{V}_{jkt} , and for the total bed-places (overnight stays), \hat{N}_{jkt} .

Being \hat{Y}_{jktm} the estimator for any of these variables, for each province, island, j, modality (type of establishment), k, size group, t, and residence (residents or non-residents) m.

The estimated relative sampling error (in percentage) is calculated as follows:

$$\widehat{CV}(\hat{Y}_m) = \frac{\sqrt{\hat{V}(\hat{Y}_m)}}{\hat{Y}_m} * 100$$

where:

$$\hat{V}(\hat{Y}_m) = \sum_h \hat{V}(\hat{Y}_{jktm})$$

and h denotes the strata (jkt) and $\hat{V}(\hat{Y}_{jktm})$ is calculated as followed:

$$\hat{V}(\hat{Y}_{jktm}) = (1 - f_{jkt}) \cdot \frac{e_{jkt}}{e_{jkt} - 1} \cdot \frac{\hat{P}_{jkt}^2}{\left(\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}\right)^2} \cdot \sum_s (Y_{ijktm} - \hat{R}_{jktm} P_{ijkt})^2$$

where

$$f_{jkt} = \frac{e_{jkt} + c_{jkt}}{E_{jkt}}$$

and $s = e$, and

$$\hat{R}_{jktm} = \frac{\sum_{i=1}^{e_{jkt}} Y_{ijktm}}{\sum_{i=1}^{e_{jkt}} P_{ijkt}}$$

12 Linkage Coefficients

Methodological changes or extraordinary updates to the directories forming the survey framework may result in newly published data that are not directly comparable with previously published figures.

To prevent breaks in the time series and ensure comparability, linkage coefficients are calculated and applied to previously published data before the introduction of these changes.

Linkage Coefficients

Due to the strong seasonality of these series, different linkage coefficients are calculated for each month, ensuring that year-on-year variation rates remain consistent, even if month-to-month variations are not preserved.

For each month, the linkage coefficient of a variable X is obtained as the ratio between the estimated value of the variable in the given month of year T , considering all available information (including methodological changes and/or directory updates) and the estimated value of the same variable in the same month but without considering the new updates.

$$CX_{i,T} = \frac{X_{i,T}^{conmejoras}}{X_{i,T}^{sinmejoras}}$$

where:

- $i = 1 \dots 12$ months
- $X_{i,T}^{conmejoras}$ = Estimated value of the variable X in month i of year T using all available information.

- $X_{i,T}^{\text{sin mejoras}}$ = Estimated value of the variable X in month i of year T without taking into account the updates.

Linked series

The linked and comparable series with the published data are calculated by multiplying the previously published series (before the introduction of improvements) by the linkage coefficient for the corresponding month.

$$X_{i,T-j}^{\text{enlazada}} = X_{i,T-j}^{\text{pub}} \times CX_{i,T}$$

where:

- $i = 1 \dots 12$ months
- $X_{i,T-j}^{\text{pub}}$ = Estimated published value of the variable X in month i of the year $T - j$ (where $j > 0$)
- $CX_{i,T}$ = Linkage coefficient for the variable X in month i

Since the linkage coefficients have been calculated independently for each geographical breakdown, category, or nationality, the linked series lose their additivity.

13 Empty strata treatment

A strata (province/island-modality-size group) is considered empty when there are no questionnaires available for the sample selected in the strata. When this occurs, the procedure is as described below:

1. If a strata only contains refusals and closed establishments, the estimate is ZERO, since all refusals are assumed to be closed establishments.
2. If there are only refusals, it is assumed that all the refusals are open (since there is no record of any closed establishments) and said strata must be imputed as described in point 4.
3. If in an area or a point, there are open establishments in a strata, but none are sampled, that strata is imputed according to the following point.
4. Once the donor strata has been selected (the search process is described below) and its estimators calculated, the imputation is made to the empty strata, according to the open vacancies in the directory of the empty strata, since it has been assumed that there are no closed establishments.

We call kt' the empty strata and kt the donor strata:

- The estimation of the variables "number of open establishments", "number of bed-places" and "number of rooms" will be the directory data.

- For the rest of the variables:
 - We calculate the estimators for the non-empty strata:

$$\hat{V}_{jkt} = \left[\sum_{i=1}^{e_{jkt}} V_{ijkt} \right] \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}}$$

- We calculate the estimators for the empty strata:

$$\hat{V}_{jkt'} = \left[\sum_{i=1}^{e_{jkt}} V_{ijkt} \right] \cdot \frac{\hat{P}_{jkt}}{\sum_{i=1}^{e_{jkt}} P_{ijkt} \cdot \frac{dm_{ijkt}}{D}} \cdot \frac{\hat{P}_{jkt'}}{\hat{P}_{jkt}} =$$

5. The order of donor strata search is as follows:

- Within the same type of accommodation K:
 - If t=1 is empty strata, the donor would be t=2. If it were also empty, it would be t=3.
 - If t=2 is empty strata, the donor would be t=1. If it were also empty, it would be t=3.
 - If t=3 is empty strata, the donor would be t=2. If it were also empty, it would be t=1.
 - In strata where there is no size distinction 1 and 2 (called sub-strata 0), there are only sub-strata 0 and 3:
 - If t=0 is empty strata, the donor would be t=3. In case it is also empty, b) applies.
 - If t=3 is empty strata, the donor would be t=0. In case it is also empty, as described in b) above would apply
 - In strata where there is only sub-strata 0 (i.e. there is no sub-stratification by size within the mode), if it is an empty strata, then b) would apply.
- If no donor strata is found within the same modality, it will be searched in the modality "rural house", within the same province/island j and with the same size group as the gap. If this strata were also empty, the order of search by size group described in a) above would apply.
- If the strata "rural house" in province/island j is empty, the geographical breakdown to be estimated cannot be calculated.
- Cases b) and c) apply to all ACs except Galicia, where the following criterion is followed:
 - If 3 is the empty strata: 3 to 5, then to 7, then to 6.
 - If 5 is the empty strata: 5 to 7, then to 6, then to 3.
 - If 6 is the empty strata: 6 to 3, then to 5, then to 7.
 - If 7 is the empty strata: 7 to 6, then to 3, then to 5.

Where:

- 3.- Rural house (B)
- 5.- Active tourism (C)
- 6.- Large buildings (A)
- 7.- Other (D)

The search criteria within these modalities, depending on the size group, is as described in b).