



**Population mobility study based on mobile phone data (EM-4)  
July and August 2021**

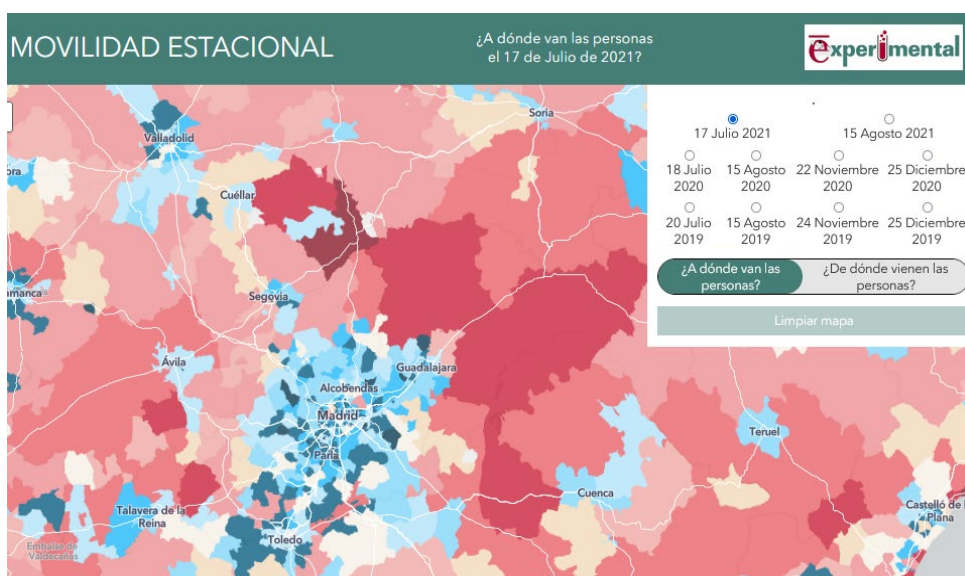
**Mobility to holiday destinations in summer was 9.2% higher than in  
2020, but 11.2% lower than in 2019**

The population mobility study based on the mobile phone positioning data during the January-December 2021 period (EM-4) analyses, in particular, the mobility of residents in Spain for two specific days of the summer (July 17 and July 15 of August).

In the data and maps released today allows us to see how the resident population in Spain was distributed -by 3,214 areas into which the entire territory is divided- on these specific days, and compare that distribution with the same dates of 2020 and 2019. This allows for comparison with the period prior to the Covid-19 pandemic.

In general, mobility to holiday destinations in 2021 was 9.2% higher than in 2020, although it remained 11.2% below the levels of the summer of 2019.

We should note that this data reflects only the mobility of the population residing in Spain, since the original source are national dialing codes. The movements of telephones with foreign numbers, which operate on roaming in Spain, are not reflected. These phones are normally in the hands of foreign tourists.

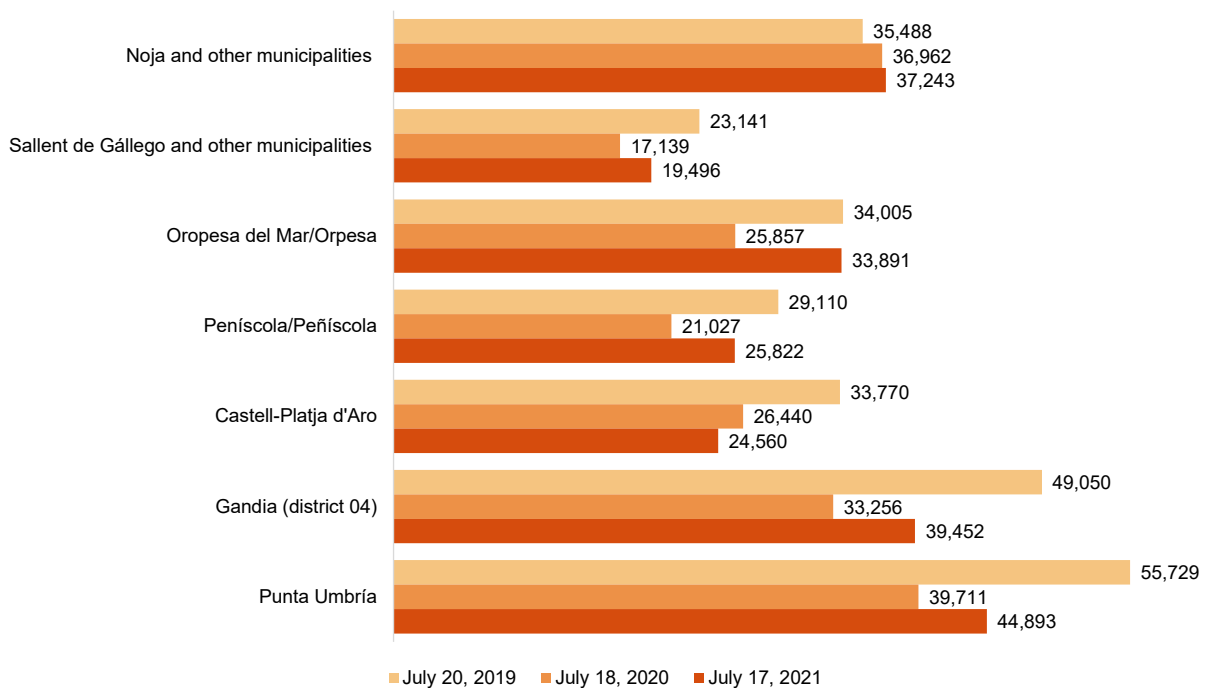


**On July 17, 2028** (the night of Friday 16 to Saturday 17) the area of Noja, in Cantabria, experienced the greatest population growth in all of Spain (against the numbers on file in the municipal registrar), just as happened in 2019. It went from 6,482 persons to 37,243 persons staying over that night - nearly six times more. This figure was 0.8% higher than for the same day in 2020 and 4.9% higher than in 2019.

Sallent de Gállego, in the Huesca Pyrenees, multiplied its population by more than four. The number of people who stayed overnight that day was 13.8% higher than a year earlier, but it was still 15.8% below the figures for the same weekend in 2019.

In areas such as Peñíscola, Oropesa del Mar, Gandía and Valle de Hecho, the population that stayed overnight on July 17, 2021 was very high (between two and four times higher than the registered population) and higher than for the same day in 2020. In almost all cases, however, it remained below 2019 levels.

**Estimated population at top destination areas on the third Saturday of July (2019-2021)**



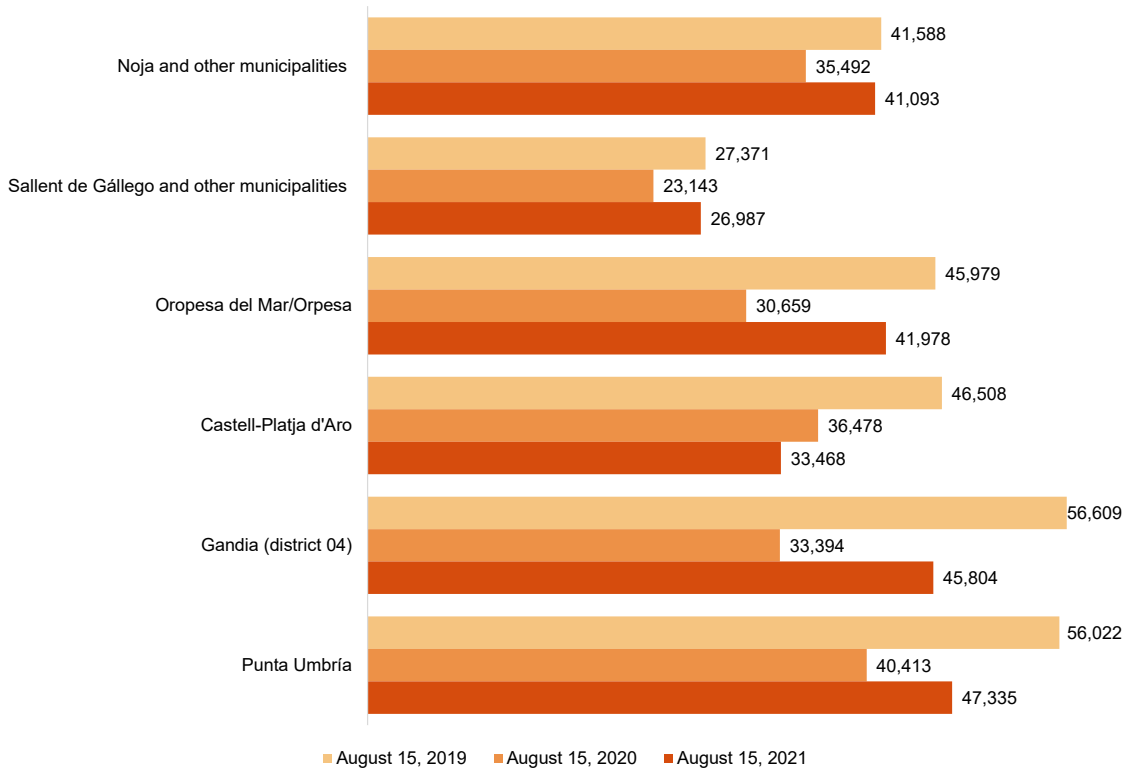
Taking the top 10 national destinations, the population registered in 2021 was 7.8% higher than that of 2020. Nonetheless, it was 12.3% lower than for the same Saturday in 2019.

**On August 15, 2020** (the night of Friday 14 to Saturday 15) the pattern was very similar, but in general terms with a greater amount of population displaced from their usual place of residence. As a result, 534% more population was concentrated in Noja than usual (in 2020 it was 448% more and in 2019, 549% more).

Many more people -than those recorded in the municipal register- were also detected in the mountainous (such as Sallent de Gállego, Alp and Valle de Hecho), coastal (such as Oropesa del Mar, Peñíscola or Gandía) and inland (such as Casalarreina) areas.

Comparing these most frequented destinations, the percentage of the total population spending the night in these areas was, on average, 14.2% higher than that registered in 2020. However, it is still 12.1% lower than that registered on August 15, 2019.

**Estimated population at top destination areas on August 15 (2019-2021)**



The mobility study allowed us to track, with great precision, population movements between origin and destination for each of the selected dates. If we focus on some of the busiest destinations, the specific areas from which vacationers arrive can be determined (even at the district level):

## Most frequent places of origin for visitors to some of the main vacation destinations (July 17 and August 15, 2021)

Destinations	July 17, 2021		August 15, 2021	
	Areas of origin	No. of people	Areas of origin	No. of people
Gandía	Dénia	296	Getafe (distrito 03)	391
	Getafe (distrito 03)	296	Dénia	350
	Puertollano	233	Arganda del Rey	312
	Arganda del Rey	230	Alcorcón (distrito 04)	263
	Cuenca (distrito 04)	225	Alcorcón (distrito 02)	258
Chiclana de la Frontera	Sevilla (SCD Number 3-A)	315	Madrid (SCD Aravaca-Plantio-Valdemarin)	527
	Sevilla (SCD Number 10-B)	308	Pozuelo de Alarcón (distrito 01)	517
	Majadahonda (distrito 02)	266	Majadahonda (distrito 02)	516
	Dos Hermanas (distrito 05)	255	Boadilla del Monte	438
	Dos Hermanas (distrito 04)	249	Madrid (SCD Mirasierra)	427
Benidorm	Albacete (distrito 02)	313	Vitoria-Gasteiz (distrito 02)	640
	Albacete (distrito 01)	270	Yecla	496
	Getafe (distrito 03)	233	Vitoria-Gasteiz (distrito 05)	362
	Arganda del Rey	225	Vitoria-Gasteiz (distrito 03)	317
	Albacete (distrito 07)	201	Albacete (distrito 01)	267
Torrevieja	Murcia (SCD Number 1-B)	376	Murcia (SCD Number 1-B)	452
	Getafe (distrito 03)	375	Arganda del Rey	443
	Murcia (SCD Number 1-A)	299	Getafe (distrito 03)	425
	Móstoles (distrito 02)	298	Móstoles (distrito 03)	416
	Alcorcón (distrito 04)	294	Alcorcón (distrito 04)	386
Santander	Burgos (distrito 05)	427	Burgos (distrito 05)	549
	Pozuelo de Alarcón (distrito 01)	165	Pozuelo de Alarcón (distrito 01)	293
	Palencia (distrito 07)	163	Palencia (distrito 07)	257
	Palencia (distrito 05)	155	Madrid (SCD Nueva España)	251
	Madrid (SCD Aravaca-Plantio-Valdemarin)	143	Madrid (SCD Hispanoamérica)	231

### The summer exodus from the big cities

Taking as a reference areas with more than 10,000 inhabitants, on August 15, 2021, less than 25% of the resident population was located in some areas of Asturias, Guipuzkoa, Murcia and Zaragoza, and in the provinces of Madrid y Barcelona.

As for the large cities of Spain, the main destinations for people originating from Madrid were located in summer on the Cadiz coast (Chiclana), in the Levant (Gandía, Denia and Oropesa del Mar) and in the province of Segovia.

In the case of Barcelona, the most frequent destinations were places on the Catalan coast and the Pyrenees, such as Palafrugell, Alp and Calafell.

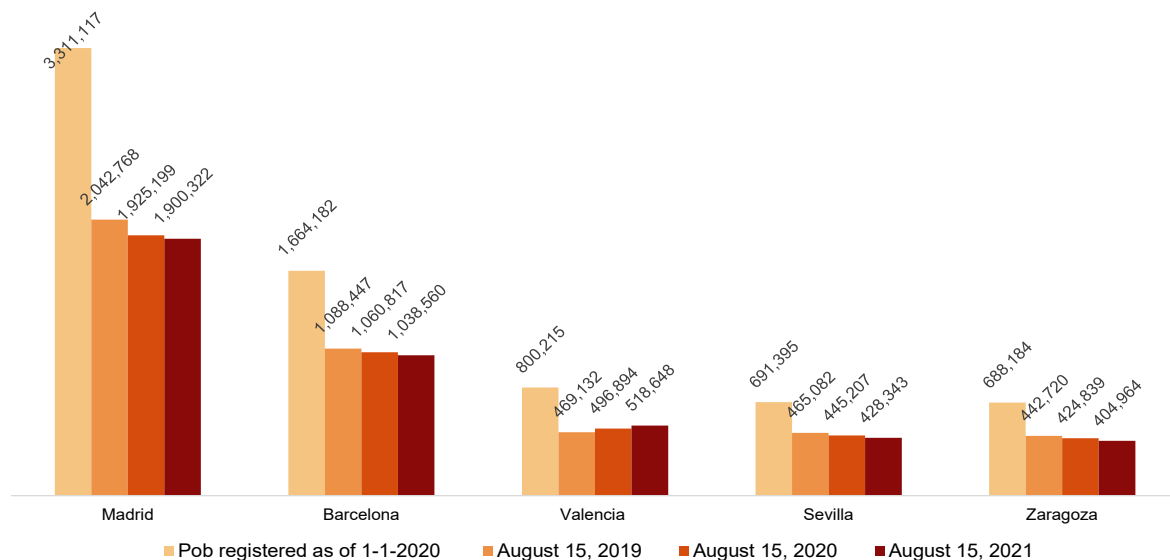
Residents of Valencia primarily chose destinations on the Levantine coast (especiallly Denia and Jávea); those in Seville opted for coastal areas in Cádiz and Huelva (such as Chipiona, Rota and Almonte); and those in Zaragoza headed for mountainous areas (such as Sallent de Gállego and Jaca) and the Catalan coast (Salou).

The situation in 2021 is analogous to what happened in the summer of 2020, although with higher flows. Thus, movements of travellers from each of the main cities increased in the five most frequent destinations, on average, by 32.5% compared to 2020. However, if compared with of 2019 this figure remains 3.0% lower.

## The five most frequent destinations for residents in the principal cities

Main cities of origin	Main destinations	No. of people		
		August 15, 2019	August 15, 2020	August 15, 2021
Madrid	Chiclana de la Frontera (distrito 05)	10,068	7,699	8,342
	Gandia (distrito 04)	9,652	5,963	7,849
	Dénia	7,473	5,188	7,542
	Boceguillas y otros municipios	6,014	3,252	6,494
	Oropesa del Mar/Orpesa	3,417	3,240	5,658
Barcelona	Palafrugell	9,253	8,017	9,246
	Alp y otros municipios	7,288	6,334	6,060
	Calafell	6,184	6,133	6,049
	Begur y otros municipios	6,032	5,584	5,830
	Vendrell, El	5,513	4,031	5,323
Valencia	Jávea/Xàbia	7,945	6,157	8,207
	Dénia	6,067	4,831	5,660
	Viver y otros municipios	3,792	2,888	3,913
	Moncofa y Chilches/Xilxes	2,754	1,600	2,559
	Mora de Rubielos y otros municipios	2,665	1,571	2,522
Sevilla	Chipiona	13,987	9,234	12,322
	Rota	13,050	9,104	11,461
	Almonte	12,614	8,052	10,406
	Lepe	10,408	6,607	8,204
	Isla Cristina	9,406	6,389	8,005
Zaragoza	Sallent de Gállego y otros municipios	8,509	6,609	8,245
	Salou	7,154	5,441	6,792
	Jaca	5,968	4,805	6,071
	Peñíscola/Peñíscola	5,387	3,981	5,502
	Valle de Hecho y otros municipios	4,881	3,536	5,205

## Population found in major cities on August 15 (2019-2021)



As a whole, in the main cities there was much less population during these holiday dates than the one that usual.

## **Full and empty provinces and areas**

As in 2020, the province of Ávila gained the most population on August 15, 2021, despite not having any particularly prominent tourist destination. In concrete terms, it recorded an increase of 49.8% (with the increases in Barco de Ávila and Navaluenga being of particular note). Its population gain was 18.9% higher than in 2020, but still 12.1% lower than in 2019

The second province with the highest population growth on August 15 was Segovia, with an increase of 39.7%. Next came Teruel, with a of 35.6% increase in persons.

On the other hand, in the summer of 2021, some provinces had much less population than that recorded in the municipal register. On August 15, 2020, only 61.2% of the population in the Community of Madrid were habitual residents. In the province of Zaragoza registered 67.0% and the province of Zaragoza, 67.3%.

On August 15, 2021, some urban areas were practically empty. In neighborhoods of Alcoy, Barakaldo, Córdoba, Irún, Segovia and Lezo, some areas had less than 10% of their population.

Some cities with more than 50,000 inhabitants also emptied out. The municipalities of Irún, Fuenlabrada, Pozuelo de Alarcón and Rivas-Vaciamadrid had less than 40% of their usual population.

## **More information**

All study information is available at:

[https://www.ine.es/en/experimental/movilidad/experimental\\_em4\\_en.htm](https://www.ine.es/en/experimental/movilidad/experimental_em4_en.htm)

## Methodological note

Results are obtained from a positioning analysis of more than 80% of mobile phones throughout Spain, prepared in close collaboration with the three main mobile phone operators (Orange, Telefónica and Vodafone).

At the end of 2019, with the aim of measuring daily (residence-work) and seasonal (residence-overnight stay) mobility on four specific dates, the INE launched a mobility study based on mobile telephony (called EM-1). The original project was adapted during the state of alarm to measure population mobility and confinement (study EM-2), and it thus take advantage of data from mobile phone operators to obtain approximate indicators on the population that remained in their area of residence.

After the first state of alarm, the INE launched a third study to measure mobility during the second half of 2020 (called EM-3), that continues in the EM-4 study for 2021.

**Statistic type:** Experimental, sporadic.

**Population scope:** The population scope consists of the mobile phones of the resident population in Spain with service from one of three above-mentioned operators; that is, mobile phones with national dialling codes. **Foreign-numbered telephones on roaming -normally used by tourists- are excluded.** The information refers only to mobile phones, not to all devices that may have a SIM card. This data is later extended to population totals; therefore, the population scope reflected is, implicitly, that of the population residing in Spain.

**Geographical scope:** the entire national territory. The national territory is divided into 3,214 specific "mobility areas" for the project, each consisting of a minimum of 5,000 inhabitants and an average of nearly 15,000 inhabitants.

**Reference period:** For the seasonal mobility data for July 17 and August 15, 2021, the most frequent position of a mobile phone between the hours of 10pm and 6am is analysed. In the case of August 15, the area where the mobile phone is most frequently located from 10pm at night on day 14 to 6am in the morning on day 15 is taken as reference.

**For more information the methodology can be accessed at:**

[https://www.ine.es/experimental/movilidad/exp\\_em3\\_proyecto.pdf](https://www.ine.es/experimental/movilidad/exp_em3_proyecto.pdf)

INE statistics are produced in accordance with the Code of Good Practice for European Statistics, which is the basis for the institution's quality policy and strategy. For more information see the section on Quality at INE and the Code of Best Practices on the INE website.

---

For further information see **INEbase:** [www.ine.es/en/](http://www.ine.es/en/) Twitter: [@es\\_ine](https://twitter.com/es_ine)

All press releases at: [www.ine.es/en/prensa/prensa\\_en.htm](http://www.ine.es/en/prensa/prensa_en.htm)

**Press Office:** Telephone numbers: (+34) 91 583 93 63 /94 08 – [gprensa@ine.es](mailto:gprensa@ine.es)

**Information Area:** Telephone number: (+34) 91 583 91 00 – [www.ine.es/infoine/?L=1](http://www.ine.es/infoine/?L=1)

---