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ANALYSIS OF THE OVERTOURISM: AN EXAMINATION OF THE IMPACTS AND IMPLICATIONS IN THE CASE OF MALLORCA

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Degree in Business Administration and Tourism

Faculty of Tourism

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Abstract

This bachelor's thesis focuses on analyzing the existence of over tourism in Mallorca by conducting a literature review on the subject and gathering relevant data on tourist activity on the island. The aim is to provide a comprehensive understanding of tourism in Mallorca, a phenomenon that affects both the island's residents and the tourists who visit it. This phenomenon may have negative consequences on the environment, culture, and quality of life of residents, making it important to determine its existence in Mallorca. To achieve this goal, an exhaustive literature review is conducted, and relevant data on tourist activity on the island are gathered.

Resumen

Este Trabajo de Fin de Grado se enfoca en analizar si existe o no "overtourism" en Mallorca, a través de una revisión de la literatura existente sobre el tema y la recopilación de datos relevantes sobre la actividad turística en la isla. Se pretende proporcionar una visión integral del turismo en Mallorca, un fenómeno que afecta tanto a los residentes de la isla como a los turistas que la visitan. Este fenómeno puede tener consecuencias negativas en el medio ambiente, la cultura y la calidad de vida de los residentes locales, por lo que es importante analizar si existe o no en Mallorca. Para ello, se realiza una revisión exhaustiva de la literatura existente sobre el tema y se recopilan datos relevantes sobre la actividad turística en la isla.

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1. INTRODUCTION

Tourism is one of the most important and lucrative industries in the world, and particularly on the island of Mallorca, it is one of the main sources of income. Over the last few decades, the tourism industry in Mallorca has experienced significant growth, attracting millions of visitors each year.

Although tourism can be beneficial for the economy of a region, it can also have negative consequences if not properly managed. One of the main concerns is overtourism, that is, the tourist overcrowding that can generate negative effects on the environment, culture, and quality of life of residents.

In the case of Mallorca, overtourism has become an increasingly important topic of debate in recent years, due to the large number of visitors that arrive on the island during the summer months. The pressure that tourism exerts on natural and cultural resources, as well as on public services and infrastructure, has led to the need to find solutions to manage the tourist flow in a sustainable way.

The choice of the proposed topic for this study is due to its relevance today and the importance that tourism and over tourism have on the island of Mallorca. The research aims to provide detailed information about the tourism situation in Mallorca, not only for residents and the destination, but also for the various agents involved in the tourism channels. The main objective of the study is to contribute to the debate on the sustainability of tourism in Mallorca and provide recommendations to improve its management, ensuring the maximization of economic benefits without compromising the environment, culture, and quality of life of local residents. It is expected that the result of this work will provide a clear and objective assessment of the current tourism situation in Mallorca, contributing to the understanding of the positive and negative effects of tourism on the destination and serving as a basis for the implementation of policies and strategies that address overtourism. Additionally, it is expected that this study can serve as a model for other similar tourist destinations.

2. OBJECTIVES

The main objective of this Bachelor's Thesis is to investigate and analyze whether or not over-tourism exists in Mallorca, which involves conducting a detailed study of the tourism activity on the island and its impact on natural resources, society, and the local economy. To carry out this analysis, a series of specific objectives have been established as mentioned below.

Firstly, a literature review will be conducted to understand the background of this study. Secondly, in order to gain insight into the possible relationship between the phenomenon of over-tourism and the island of Mallorca, a series of characteristics of the island and tourism, such as the evolution of tourism, the type of tourist consuming it, and the territorial resources attracting it, will be identified. Subsequently, to expand the perspective on over-tourism, a series of data such as tourist arrivals and stays, density, and intensity will be analyzed to verify the existence of this phenomenon in the study area. Finally, the concept of

"tourismphobia" will be developed, and policies and recommendations applied to over-tourism will be explained.

It is expected that this study will contribute to the implementation of policies and strategies to address over-tourism and promote long-term sustainable and responsible tourism.

3. LITERATURE REVIEW

In this section, a compilation of definitions, reflections, and statements on the concept of "overtourism" by several expert authors in the field who have developed literary texts around this term will be carried out. After reading several articles on "over-tourism," it can be observed that it is a term that lends itself to being explained in various ways according to each author, and there is no absolute definition for it. For this reason, an explanation according to various thinkers, scholars, and tourism organizations will be provided to expand this concept and see different perspectives.

Firstly, according to UNWTO (2018), "overtourism" can be defined as "the impact of tourism on a destination, or parts thereof, that excessively influences the perceived quality of life of citizens and/or quality of visitors' experiences in a negative way." Furthermore, the same organization states that a very important tool directly linked to the term "over-tourism," and therefore necessary to define, is carrying capacity, which is explained as "the maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, and socio-cultural environment and an unacceptable decrease in the quality of visitors' satisfaction."

However, as Espinos (2019) explains, the first time this term was published and officially recognized was in 2016 by the tourism magazine Skift by its CEO Rafat Ali, who coined the concept of over tourism as follows:

A new construct to look at potential hazards to popular destinations worldwide, as the dynamic forces that power tourism often inflict unavoidable negative consequences if not managed well. In some countries, this can lead to a decline in tourism as a sustainable framework is never put into place for coping with the economic, environmental, and sociocultural effects of tourism. The impact on local residents cannot be understated either Rafat (2018).

As the world moves towards two billion travelers worldwide in the next few years, are countries and their infrastructure ready for the deluge? Are the people and their cultures resilient enough to withstand the flood of overtourism?"

Another important definition of the concept according to the European Parliament (2018) is: "Overtourism describes the situation in which the impact of tourism, at

certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds."

On the other hand, the prominent author Goodwin (2017) defines the term over tourism as follows:

Overtourism describes destinations where hosts or guests, locals or visitors, feel that there are too many visitors and that the quality of life in the area or the quality of the experience has deteriorated unacceptably. It is the opposite of Responsible Tourism which is about using tourism to make better places to live in and better places to visit. Often both visitors and guests experience the deterioration concurrently and rebel against it.

Already in the 1960s, authors were discussing the ways in which tourism was negatively impacting destinations. This culminated in concepts such as Doxey's Irridex Model, Butler's tourism life cycle, and Pizam's description of the social costs for destination communities. (Koens, Postma & Papp, 2018)

Richard Butler, a highly recognized author in the tourism sector, developed the theory of the life cycle of tourist destinations. According to Butler (2018) , each destination goes through several stages. The first stage, the exploration stage, is characterized by a small number of tourists. In the second stage, the involvement stage, facilities are provided primarily or even exclusively for visitors. The third stage, the development stage, reflects a well-defined tourist market area shaped, in part, by heavy advertising in tourist-generating areas. However, as this stage progresses, local involvement and control of development decline rapidly. The fourth stage, the consolidation stage, is marked by a declining rate of increase in the number of visitors, although total numbers will still increase, and total visitor numbers exceed the number of permanent residents. Finally, the fifth stage, the decline stage, is characterized by the area's inability to compete with newer attractions, leading to a declining market, both spatially and numerically.

4. MALLORCA. MAIN CHARACTERISTICS

In this section, the characteristics of Mallorca will be described to understand the existing relationship between the island and the tourism it receives, as well as the reasons why it has positioned itself as one of the leading tourist destinations in Europe.

To achieve this, emphasis has been placed on explaining the square kilometers and the number of available tourist accommodations on the island, as well as the tourist attractions and territorial resources it offers. In addition, the evolution of tourism throughout history has been considered, and the typology of the tourist who predominantly visits the island has been examined.

4.1. SQUARE KILOMETERS AND TOURIST ACCOMMODATION CAPACITY

The relationship between the km² and the tourist capacity of the Island is highly relevant to understand Mallorca's carrying capacity and its tourism sustainability. To do so, first, the Island's topographical characteristics have been described, and secondly, its tourist capacity and its evolution in the early years have been developed.

As described by Ginés, Gómez, Onac & Fornós (2012), Mallorca is the largest and most central island of the Balearic Archipelago. These islands are located in the middle of the Mediterranean basin, slightly displaced to the west. With a perimeter of approximately 560 km and a surface area of around 3,650 km², Mallorca is the seventh largest island in the Mediterranean and, together with Menorca, they are the most remote from any continental landmass.

Given the island's length, it is observed that the surface area is limited for the number of tourist accommodations. Therefore, it is important to define what a tourist accommodation is and to examine its evolution over time.

A tourist accommodation refers to the lodging capacity available in a tourism establishment, such as hotels, apartments, rural accommodations, or campgrounds, to meet tourist demand.

A tourist accommodation unit is a measurement unit that represents a bed or a lodging space available in a tourism establishment. Therefore, the number of tourist accommodations in a destination is one of the most relevant indicators of the tourism capacity of a specific place.

The following will present the number of tourist accommodations available in Mallorca from 2011 to 2021. To do so, a table has been created with data obtained from INE (2023), which shows an approximate average of tourist accommodations available from January to December each year.

Years	Number of tourist accommodations
2011	353000
2012	356000
2013	359000
2014	370000
2015	381000
2016	390000
2017	400000
2018	405000
2019	407000
2020	346000
2021	371000

Figure1. The number of tourist accommodations between the years 2011-2021. Source: own elaboration according to data obtained from INE (2023).

As can be observed in the previous table, from 2011 to 2019, the number of tourist accommodations gradually and constantly increased by 15.6%. This growth may

be due to different factors such as the increase in tourist demand, investment in tourist infrastructure, and destination promotions by tourist authorities.

It is important to highlight the data from the year 2020, which shows a notable decrease due to the COVID-19 pandemic and travel restrictions imposed. Starting in 2021, there has been an increase in the demand for tourist accommodations, rising by 7.2% compared to the previous year, indicating a recovery of the tourism sector on the island after the pandemic.

The following table (see Figure 2) presents numerical data for different categories of tourist accommodation in consecutive years, from 2011 to 2021. These categories, which encompass the most used accommodations in Mallorca, are as follows: agrotourism, tourist apartments, guesthouses, camping, inn, hotel, aparthotel, rural hotel, hotel residence, and pension.

Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Categories											
<i>Agrotourism</i>	2.494	2.637	2.783	3.164	3.583	4.108	5.410	5.503	5.484	5.590	5.641
<i>Tourism apartment</i>	41.626	41.261	41.132	40.546	40.207	38.643	34.567	33.855	33.130	33.039	32.579
<i>Guest House</i>	508	538	550	556	540	527	527	527	479	479	479
<i>Camping</i>	500	500	500	500	500	500	500	500	500	500	500
<i>Inn</i>	230	230	230	230	230	236	236	236	236	236	236
<i>Hotel</i>	150.701	150.960	152.728	154.345	153.851	156.139	165.006	168.705	173.674	174.485	175.086
<i>Hotel apartment</i>	76.315	77.487	77.476	76.600	77.124	79.873	81.219	81.125	79.614	80.259	81.669
<i>Rural hotel</i>	1.137	1.191	1.270	1.443	1.487	1.925	1.770	1.707	1.658	1.658	1.483
<i>Hotel residence</i>	3.815	3.762	3.710	3.691	3.701	3.590	3.084	2.839	2.747	2.680	2.601
<i>Pension</i>	23	23	23	23	23	23	23	23	23	23	23

Figure 2: The number of tourist accommodations analyzed by accommodation category between the years 2011-2021. Source: own elaboration according to data obtained from IBESTAT (2023).

In general, it can be observed that most categories of tourist accommodation have experienced an increase in the number of registered establishments over time. For example, the number of agrotourism accommodations has steadily increased each year, from 2,494 in 2011 to 5,641 in 2021.

On the other hand, some categories have experienced fluctuations in the number of registered establishments. For instance, the number of tourist apartments has gradually decreased from 41,626 in 2011 to 32,579 in 2021. The pension category has maintained a constant number of 23 registered establishments each year.

4.2. THE MAIN TOURIST ATTRACTIONS AND RESOURCES

As Navarro (2015) explains, the tourist resource and tourist attractions are elements of nature, cultural objects, or social events that, with adequate and planned management by human beings, can serve as an incentive for people to travel as tourists. Additionally, tourist attractions and tourism resources involve natural or cultural goods (formal aspect) and have the capacity to trigger visitation (functional aspect).

On the other hand, Navarro (2015) distinguishes different types of tourist resources and classifies them as follows: natural resources (climate, seas, lakes, rivers, mountains, forests...), socio-cultural resources (works of artistic creation

such as painting, sculpture, music...), cultural resources (archaeology, prehistoric art, traditions...), entertainment venues (theaters, cinemas, nightclubs...) and finally health, recovery, and relaxation centers.

The tourist attractions in Mallorca are of great importance to the island's economy since tourism represents a significant part of its GDP. The wide variety of attractions attracts many tourists every year. The main tourist attractions on the island include the Cathedral of Santa Maria in Palma, the Serra de Tramuntana, the Castle of Bellver, the Drach Caves, its towns such as Valldemossa, and above all, the beaches that Mallorca has, as they are one of its biggest draws and play a crucial role in the tourism industry.

4.3. TERRITORIAL RESOURCES

Mallorca is home to a wide variety of territorial resources that are of great importance for the economic and touristic development of the region. Among them, it is beautiful beaches, rich cultural heritage, natural landscapes, gastronomy, and the presence of protected areas stand out. In this context, the relevance of the climate as a territorial resource has been highlighted, as its warm and sunny weather is a determining factor in attracting tourists. However, the combination of climate with other factors has generated the phenomenon of over tourism and seasonality in Mallorca.

The climate is a reality independent of tourism activity, but it becomes a natural tourist resource when it is promoted for commercial use, with the purpose of satisfying a previously existing need in the demand that motivates tourists to travel (Gómez, 2005).

Thus, the climate as a natural resource becomes a tourist attraction when it is positively appreciated by tourists and has an influence on their purchasing decision. Because of this importance of climate in decision-making, it is increasingly common to incorporate it into the destination's image as part of the tourism product (Coll & Seguí, 2014).

When tourism takes advantage of or uses a specific area, it does so because there are certain elements that make it up and that, if valued by society, can be exploited and used in the creation of tourist goods and services. This is how the geographical space and its elements, whether of geophysical or geohuman origin, become tourist resources. These resources are essential for the development of any tourism project.

In Mallorca, due to the type of climate, there is a phenomenon called seasonality. As defined by Coll & Seguí (2014), tourist seasonality refers to the fluctuations in the arrival of tourists that a specific tourist destination experiences throughout the year. This phenomenon, as it is currently known in Mallorca (Spain), emerged with the development of mass tourism in the 1960s.

The tourist destination refers to the massive influx of tourists during the summer season, attracted by the warm weather and beaches. One negative effect of this concentration of tourists in certain times of the year, as pointed out by Binimelis

(2019), is that it also affects other businesses and establishments that experience low demand in winter and are forced to close.

4.4. EVOLUTION OF TOURISM IN MALLORCA

In this section, the evolution of tourism is explained by dividing it into several stages from before 1902 to after 2002, as it allows us to understand how the economy and society have changed. Prior to the 1950s, the economy of the Balearic Islands focused on agriculture and crafts. However, starting in the 1960s, tourism began to become the basis of an unprecedented economic growth model in the Balearic Islands, as indicated by Binimelis (2019).

4.4.1. TOURISM BEFORE 1905

Tourism in Mallorca did not begin to develop until the late 19th and early 20th centuries. Before 1905, the tourism sector in the Balearic Islands had very little significance, with the agricultural sector being the most abundant, followed by commerce and fishing.

Two important events are noted as having propelled the development of the tourism industry on the island. The first is the opening of the Grand Hotel in 1903, considered the first luxury facility on the island; and the second is the founding of the Mallorca Tourism Development Society in 1905 (Forteza, 2015).

We can see the efforts made during this period to promote tourism in the article written by Forteza (2015), where it is explained that on October 6, 1905, shortly before the creation of the Mallorca Tourism Development Society, the Minister of Development, Alvaro Figueroa, approved a royal decree urging the private sector to promote and develop tourism following the example of other European nations. The decree considered the need to create a permanent national commission responsible for promoting the artistic and recreational excursions of foreign visitors in Spain.

Additionally, it was recommended to improve and increase transportation services, accommodations, and all types of services related to travelers, as well as the training and dissemination of travel itineraries abroad with the intention of visiting the country's main artistic monuments and scenic sites.

In conclusion, we can say that tourism in Mallorca before 1905 was a sector with very little significance, but there were already several attempts to promote the island as a tourist destination, supported by the appearance of the railway in Mallorca at the end of the 19th century, which helped with the transportation of passengers and promotion of tourism. Despite this, it will not be until the early 20th century when the major transformations take place that will make tourism a significant economic activity in Mallorca.

4.4.2. TOURISM BETWEEN 1905 AND 1936

During this period, tourism in Mallorca experienced significant growth and became one of the main economic sources for the island. Several important events occurred during this time that led to the growth of tourism, which we will analyze below.

As previously mentioned, in 1905 the Tourism Development Society was founded in Mallorca, which was crucial for the development of tourism. Improving internal communications, particularly access to places of interest such as the Caves of Arta, the Caves of Drac, the Castle of Alaro, Sineu, Port de Alcudia, or the Torrent de Pareis, was one of the main objectives of the Tourism Development Society in Mallorca. Additionally, they focused on building the Andratx to Estellencs road, where the Ricard Roca viewpoint was constructed, and organized walking excursions for island residents. The Tourism Development Society also worked on managing access to monuments that were previously difficult to visit, such as the Cloister of San Francisco, La Lonja and the Consulado del Mar, the Castle of Alaro, the Castle of Bellver, among others (Llompart, 2020).

Another important element in the development of tourism during this time was literature, as mentioned by Llompart (2020). For example, in 1910, P. Fetter and Giber published "De Turismo," where they explained theories about the future of tourism in Mallorca. There were also publications abroad that spoke of Mallorca, such as Mary Stuart Boyd's "The Fortunate Islands" in 1911. Furthermore, after his visit to Mallorca, Miguel de Unamuno wrote the book "Andanzas," which includes interesting articles about the island. Lastly, it is worth mentioning Rubén Darío, who wrote several articles about Mallorca in his "Epístola a la Señora de Lugones."

All of this helped to consolidate the tourist image of Mallorca, but all these efforts were cut short by the outbreak of the First World War, which took place from 1914 to 1918. Tourism on the island gradually recovered until the outbreak of the Spanish Civil War in 1936, which had a significant impact on tourism in Mallorca as the island became a battlefield. The outbreak of the war forced many hotels and restaurants to close, and as a result, tourism declined.

Tourist recovery in the Balearic Islands came after the end of the Second World War, but the tourism boom on the island during the mentioned period helped lay the groundwork for tourist success on the island in the following years.

4.4.3. TOURISM BETWEEN 1936 AND 1951

These years were difficult for tourism in Mallorca, as explained by Barceló (1983), since the influx of tourists to the island was interrupted during the Spanish Civil War and World War II, and international tourism was also affected by Spain's political isolation, which was not lifted until 1951. The lack of visitors and difficulties in promoting raw materials and energy resources resulted in a severe crisis for tourism activities.

As a consequence, some hotels, including the Grand Hotel, were forced to close. Nevertheless, the Tourism Promotion Society carried out a propaganda effort to attract domestic tourism and maintain the tourism infrastructure.

During this period, one can see the low tourist influx that Mallorca experienced. In 1945, there were only 69 foreign tourists out of 53,134 visitors to Mallorca, of which 6,000 were couples. The following year, in 1946, the number of visitors increased to 61,514, with a total of 1,229 foreigners. By 1950, the number of tourists had reached 98,000, of which 22,000 were foreigners, mainly French. It is worth noting the increasing importance of air transport, as in 1943 it represented only 1.7% of the passengers arriving in Mallorca, while in 1950, this figure rose to 30.30% (Barceló, 1983).

In conclusion, tourism began to recover after the civil war and World War II, with restaurants and hotels that had closed reopening, and new establishments opening. Thus, little by little, tourism on the island started to increase again, receiving foreign visitors, and the tourism sector started to become more important in the island's economy.

4.4.4. TOURISM BETWEEN 1951 AND 1975. MASS TOURISM

During this period, tourism in Mallorca experienced a huge boom and transformation, with an increase in the number of tourist accommodations available. This turned Mallorca into one of the top tourist destinations in Europe. The increase in tourist accommodations and demand led to the consolidation of mass tourism, which is known as the tourism boom in the Balearic Islands.

Between 1951 and 1960, Mallorca experienced significant economic growth. The end of Spain's political isolation and post-war recovery in 1951 allowed for an increase in tourist demand that was consolidated by the 1959 Stabilization Plan, which improved visa conditions and facilitated currency exchange. This period marked the beginning of a significant economic and social transformation driven by the development of the tourism sector (Barceló, 1983).

All this favored mass tourism in Mallorca, a very attractive island, both for the image it had forged in previous periods and for its new infrastructure.

Between 1960 and 1973, the increase in tourist demand and supply was truly outstanding. In just these years, the number of tourists on the island went from 361,000 to 2,849,632, with constant positive annual increases. Therefore, during this period, tourism underwent a great transformation that had a significant local impact and posed challenges regarding the preservation of the island's natural and cultural heritage.

4.4.5. THE 1983 CRISIS AND ITS RECOVERY

In 1973, the oil crisis affected all industrialized countries, leading to a significant decrease in the number of tourists visiting Mallorca. As a result, the economy of the island faced significant challenges since many economic activities were heavily dependent on tourism, leading to a considerable decrease in capital income. According to Barceló (1983), a significant growth in demand was observed from 1978 onwards, despite the decrease in tourism supply.

Since 1975, the tourism industry in Mallorca has evolved, with a focus on improving the quality of services offered to tourists. Today, Mallorca continues to be one of the most popular tourist destinations in Europe, with a diverse and extensive range of offerings to meet different demands.

4.5. TYPE OF TOURIST

The following types of tourists that can be found in Mallorca will be analyzed below. Although a specific type of tourist, such as sun and beach tourism, may prevail, there are several modalities of tourists that can be found on the island according to their behaviors, preferences, and needs that the island can meet due to the variety of options and resources it possesses. As Koens, Postma, and Papp (2018) explain, "Cities provide visitors with a range of multifunctional, complex, multiuser environments. They are able to simultaneously host increasing numbers of domestic and international leisure tourists, but also business tourists and people visiting friends and relatives (VFR)."

4.5.1. SUN AND BEACH TOURISTS

Sun and beach tourists are those who travel to coastal destinations and islands that offer beaches and a pleasant climate with the purpose of enjoying the sun, sea, and beach, whether traveling alone, as a couple, or in groups.

The Balearic Islands are primarily known for their beautiful coasts. The vast majority of tourists visit the island during the Spring-Summer months, engaging in sun and beach tourism. This has led to one of the main problems generated by this tourism, seasonality (Payeras, 2020).

Therefore, sun and beach tourists are very important for the Balearic economy as they represent the largest part of the tourism sector and therefore the economy of Mallorca. These tourists generate a large amount of income for the island and contribute to the creation of employment in restaurants, shops, hotels, etc. For this reason, local authorities and tourist companies work continuously to improve the infrastructure and offer of services to ensure that these tourists have a good experience on the island.

The great problem generated by this type of tourism is over-tourism, which is especially evident during the high season of this type of tourism, and this can lead to negative consequences for the local community, the environment, and the quality of life of the residents of the island, which we will analyze throughout the rest of the work.

4.5.2. CULTURAL TOURISTS

Cultural tourists are an important group of visitors in Mallorca, as the island has a rich history and cultural heritage that can be of great interest to tourists traveling for cultural purposes.

The Cathedral of Palma is one of the island's most prominent cultural attractions. Tourists interested in culture who visit the cathedral are taken back to two

historical periods. The first of these, which began in late 1905, was the starting point and focused on the creation of the Capitular Museum. Meanwhile, the second period, which began in the 1930s, focused on the consolidation and development of the site, becoming a real advertising campaign to attract tourists. During this period, the first tourist guides to the ecclesiastical complex were published in several languages and the exhibition space for the treasure was improved (Forteza, 2015).

Although the Cathedral of Mallorca is one of the island's most important cultural assets, there are others such as Bellver Castle, towns like Valldemossa, the Pilar i Joan Miro Foundation, the Lluc Monastery, etc. These tourists are usually interested in learning about the history and culture of the island and enjoy local architecture, art, and gastronomy.

4.5.3 SPORT TOURISTS

Sports tourism in Mallorca is an activity that is constantly growing, as the island boasts a privileged climate, great natural surroundings, and a wide variety of sports facilities. Regarding the sports activities that are carried out on the island, both by tourists and residents, they include golf, running, water sports, but above all, cycling.

According to Payeras (2020), there are several types of sports tourists. Firstly, active tourism, where the tourist moves from their place of residence to engage in a sport, in Mallorca, the most common case would be cycling, due to the island's steep slopes, landscapes, and good weather, making it a popular destination for this type of sport. Secondly, we have passive sports tourism, which is defined as the type of tourism where tourists travel to appreciate a specific sporting event, in Mallorca, an example could be the Palma Marathon. Finally, there is sports tourism known as Celebrity, which consists of people who travel to visit museums or specific places related to sports.

This type of tourism is very favorable for the island as it helps to desestacionalize tourist activity, as it is not only carried out during the summer season, which is the season where the island receives more visitors due to sun and beach tourism. Therefore, as Payeras (2020) mentions, "it is very important to promote tourist activity during the low season. Sports tourism is a solution to this serious situation, which could help the destination break or at least ease the seasonality."

4.5.4. BUSINESS TOURISTS

Meetings tourism is a segment of tourist demand that includes convention, congress, and incentive tourism, also known as corporate meetings. This type of tourism is gaining more and more volume within the global tourism sector (Binimelis & Ordinas, 2003).

As Binimelis & Ordinas (2003) explain, in Mallorca, there are three types of facilities where meetings tourism is frequent. Firstly, there are events related to convention centers that require infrastructure that can only be found in exclusive

facilities for this type of tourism. Secondly, there are a large number of hotels equipped with specific rooms for these events. Finally, there are agencies dedicated to the promotion of this type of activity known as professional congress organizers (OPC).

It is worth noting that the high season for this type of tourism coincides with the low season of sun and beach tourism, and the tourist spending generated by delegates or attendees at an event multiplies the tourist spending of conventional tourism by 7. Therefore, it is important to promote this type of tourism on the island, due to the tourist spending they generate and the help they provide to reduce seasonality. The problem is that the Balearic Islands have remained on the sidelines of the expansion of business tourism due to the low involvement of the administration.

5. INDICATORS OF OVERTOURISM

In order to measure the over tourism of a destination, it is important to have tourism indicators that allow evaluating the impact of tourism in the area and taking measures to avoid the deterioration of the environment and the quality of life of the local population. Tourism indicators are tools that allow collecting data and statistics on different aspects of tourism in a destination, such as the number of visitors, hotel occupancy, tourism expenditure, among others. By analyzing these indicators, a clear understanding of the level of tourism in the destination and its impact on the local community can be obtained.

In conducting an analysis of the existence of over tourism in Mallorca, various variables such as arrivals, stays, Human Pressure Index (HPI), residents, and overnight stays were studied both monthly and annually from 2011 to 2021. This approach allowed an evaluation of the evolution of these variables during the month's most prone to over tourism (June, July, August, and September) as well as annually, in order to determine if the island suffers from over tourism. With regards to tourism indicators, the focus was on the calculation and analysis of tourist density and intensity, as these are considered the main causes of over tourism according to the European Parliament (2018).

According to the World Tourism Organization (2004), some advantages of having good tourism indicators to measure over tourism are: firstly, these indicators facilitate decision-making by reducing the risks and costs associated with tourism management. Additionally, they allow identifying the impacts of tourism and adopting corrective measures, if necessary, which contributes to improving the sustainability of tourism in general. They are also of great help in evaluating the results of management plans and activities and measuring progress towards sustainable tourism development. Finally, the use of these indicators can promote an improvement in tourism management by allowing constant monitoring and the incorporation of innovative solutions. In conclusion, having good tourism indicators is essential to ensure effective and sustainable tourism management.

5.1. DATA ANALYSIS

Firstly, the tourist arrivals and overnight stays (see annexes 1, 2, 3, and 4) will be explained. Tourist arrivals refer to the number of people who travel to a tourist destination in a specific period. On the other hand, tourist overnight stays (see annex 5), also known as tourist stays, refer to the number of nights that tourists spend in a tourist destination during their visit. It is worth noting that the latter are usually expressed as an average, that is, the average number of nights that tourists spend in the destination is calculated.

Analyzing the monthly arrivals of tourists to Mallorca, it can be observed that during the months of June, July, and August, there is a high trend in the number of tourist arrivals, which are the months with the highest tourist activity on the island. However, a decrease in September is noted, which could indicate that the island suffers from seasonality, as this decrease repeats every year. On the other hand, if this evolution is analyzed annually, it can be observed that there is a general upward trend in the number of tourist arrivals from 2011 to 2019, with a slight increase in the number of arrivals each year. However, in 2020, there was a significant decrease in the number of tourist arrivals due to the COVID-19 pandemic. In 2021, there is a recovery in the number of arrivals, but it still does not reach the levels of 2019.

Regarding tables 2 and 4 of overnight stays during the months of June, July, and August from 2011 to 2021, it can be observed that the total overnight stays in Mallorca have decreased in recent years, especially during the months of June and September. In 2020 and 2021, like arrivals, stays have decreased significantly due to the pandemic. As for the months of July and August, overnight stays have generally remained more stable, although some fluctuations have also been recorded.

If tourist arrivals and overnight stays are compared, it can be observed that although tourist arrivals have been increasing in recent years, overnight stays have decreased, suggesting that tourists are spending fewer nights on average in Mallorca. This could be an indication of greater pressure on the destination's resources and infrastructure. This may be due to several factors, such as an increase in the number of visitors taking short trips or a decrease in the average length of stays.

In general, when arrivals increase but overnight stays decrease, there may be a negative impact on the local economy and the tourism industry. This is because tourists spend less time at the destination and therefore spend less money on accommodation, food, transportation, and other tourist activities.

Secondly, the Human Pressure Indicator (PHI) has been calculated (see annexes 6 and 7) with the aim of complementing official population figures, which focus on resident population. This indicator estimates the total number of people in the territory per day (Serra, 2017). As the objective of the analysis is to determine whether overtourism exists or not, the data will be analyzed using the highest PHI level of each month and year as a reference. This data is calculated by adding the number of tourists and residents in a specific geographical area, in this case, Mallorca, and dividing it by the number of square kilometers on the island. It can

be observed that the PHI has been increasing year by year since 2011 until 2019, reaching its peak in September 2019 with 1,346,359 people per km². This indicates that the impact of tourism on Mallorca has been intensifying over time, suggesting a possible situation of overtourism since an increase in PHI indicates an increase in pressure on the resources and infrastructure of the place. However, it is important to note that the data from 2020 and 2021 are influenced by the pandemic, which has significantly affected tourism worldwide and may have affected the accuracy of the PHI data in Mallorca during these years.

Thirdly, to evaluate overtourism, several indicators have been developed, with one of the most important being the tourist density ratio (see annex 9). Tourist density is defined as the annual number of overnight stays per km² (European Parliament, 2018).

The tourist density ratio is an indicator that measures the number of tourists in relation to the size of the destination, generally expressed in terms of square kilometers. This indicator is used to assess whether a destination is experiencing tourist overload. If tourist density is high, it is likely that the destination is experiencing excessive pressure on its capacity, which can have negative effects on the environment, the quality of life of local residents, and the tourist experience.

The overnight stay data in Mallorca shows clear seasonality, with the months of July and August recording the highest number of overnight stays in the analyzed years, followed by June and September. This suggests that Mallorca is a highly seasonal tourist destination, with most tourists visiting the island during the summer.

Furthermore, although total overnight stays increased overall from 2011 to 2019, the year 2020 recorded a drastic decrease due to the COVID-19 pandemic. It is interesting to note that in 2021, overnight stays in June increased significantly compared to the previous year, while overnight stays in July and August decreased greatly. This suggests that the pandemic influenced the seasonality of tourism in Mallorca, possibly prompting some tourists to visit during traditionally less crowded months.

However, despite the decrease in overnight stays in 2020 and 2021, the data still suggests that Mallorca continues to face the problem of over tourism during the high season of summer. Tourist densities in the months of July and August are particularly high, indicating a possible excessive pressure on the resources and tourist infrastructure of the island during these periods. The decrease in overnight stays during these months in 2020 and 2021 could be considered a positive effect in terms of alleviating overtourism, although the economic and labor situation of the island needs to be considered in the context of a decrease in tourism.

Finally, another relevant indicator called the tourism intensity index has been calculated (see Annex 10). The tourism intensity index is a tool used to evaluate the level of pressure that tourism exerts on a particular destination. Tourism intensity is defined as the annual number of bed-nights per inhabitant of the destination (European Parliament, 2018). The intensity index for measuring over-

tourism considers factors such as the density of tourists in a particular area, the duration of their stay, the type of accommodation used, and the way they move within the destination. This index is based on the idea that the impact of tourism does not only depend on the number of tourists who visit a destination, but also on how they are distributed in time and space.

Classifying a destination as having a very high, high, medium, or low tourism intensity can be useful in determining the type of policies that should be defined to eliminate negative externalities and increase positive ones (Manera & Valle, 2018). This analysis uses tourism intensity ratios, which are represented as a percentage and show the number of tourists in a particular month relative to the number of inhabitants in the area. These data are important in determining the impact of tourism on the economy and the local community. To obtain these ratios, the number of overnight stays on the island was divided by the number of residents. This number of residents was calculated by subtracting the overnight stays from the Human Pressure Index (HPI). The presentation as a percentage allows for the identification of the proportion of tourists relative to the local population and determines the tourism intensity in the area.

In general, there is a trend towards an increase in tourism intensity during the summer months (June to September), with the highest ratios in July and August. These are peak months for tourism, so it is understandable that the intensity ratios are higher during these months. Finally, these tourism intensity ratios could be useful in understanding the impact of tourism in a particular area and in taking preventive measures in case the tourism intensity becomes too high and begins to negatively affect the environment, economy, society, and local culture.

Based on the analysis of previous data, it cannot be confirmed whether over tourism is present, as indicated by Milano (2018), because it is impossible to determine how many tourists are too many, as it depends on many other variables. Over tourism is not only about the depletion of resources or the massive influx of tourists to a place but is a subjective assessment that depends on multiple factors, such as the disruption of necessary conditions for tourism to be satisfactory for all stakeholders. Therefore, each tourist destination should consider its specificities, products and services, considering its capacity to withstand tourist pressure. In other words, the perception that a place is overcrowded will depend on the subjective or collective perspective of the individuals involved and will not be based solely on quantitative figures. It is possible for a natural environment or a public space to feel overloaded and for rights to be affected without recording excessive visitor flows. As Butler and Dodds (2019) state, a coastal tourist area is considered saturated when tourists feel that the area is overloaded.

To determine whether there is over tourism on the island, one can compare the data with the tourist carrying capacity. Carrying capacity is a crucial indicator in tourism planning, as it sets the maximum limits for the development and use of tourism resources and for the level of use by visitors. These limits are defined by the maximum congestion levels that tourists are willing to tolerate and the maximum levels of tourism and its negative impacts that local residents can endure (Mihalic, 2020).

According to Consell de Mallorca (2019), the maximum carrying capacity of the island is 430,000 places. Therefore, through this analysis, it can be concluded that over tourism exists on the island, as all data on tourist overnight stays and arrivals far exceed the 430,000 places that the Consell has established as a limit to avoid over tourism.

On the other hand, if it can be confirmed that the island has a factor called seasonality due to the increase in indices during the summer, as explained by Llompart (2014), the high concentration of tourist demand during certain periods of the year can have a significant negative impact on the society and economy of tourist destinations, which can result in detrimental consequences for their overall economic development.

In conclusion, the existence of over tourism on a tourist island like Mallorca depends on many factors, including carrying capacity and the satisfaction or dissatisfaction of residents and tourists. It is a phenomenon in which both the local community and tourists can suffer the consequences of tourist overcrowding. Through various news sources, there appears to be a trend towards dissatisfaction among residents regarding tourism. In the *Preferente News* article (2022), a new campaign called "SOS Residents" is reported to have been launched in Mallorca to tackle tourist overcrowding on the island and its negative effects on the quality of life of residents. The campaign is led by the organization "United Residents" and aims to raise awareness among tourists and authorities about the problems faced by residents in Mallorca due to uncontrolled tourism.

This dissatisfaction of residents can also be seen in the *Ultima Hora* news article (2022), which explains the "SOS Residentes Mallorca" campaign launched by a residents' organization to address the problem of tourist overcrowding on the island. The campaign aims to increase awareness about the negative effects of uncontrolled tourism on the quality of life of local residents and the environment. The campaign will include the distribution of informational materials and the organization of events to engage residents and tourists in promoting more sustainable and responsible tourism. Additionally, the campaign calls on authorities to implement measures to control tourism on the island and protect the rights of residents.

6. TOURISMPHOBIA

The term "tourismphobia" first appeared in 2008 in an article published in "El País" entitled "Tourismphobia", written by the Catalan anthropologist Manuel Delgado (Milano, Novelli & Cheer, 2019). Tourismphobia refers to the aversion that residents of a tourist destination feel towards visitors who come to enjoy the destination, although this feeling is not necessarily directed personally towards the tourist, but towards mass tourism in general. Therefore, implementing measures that address tensions between tourists and residents can have a positive impact on the sustainability of tourism and the well-being of local communities (Millán, 2020).

Tourism development is a process that is affected by the way residents of a tourist destination perceive and evaluate both the benefits and potential risks that tourism may bring. The attitude of residents towards tourism is based on their satisfaction with the quality of life in the community affected by it. It is important to note that an increase in tourism without considering the interests of local residents can lead to overtourism, which is defined as a form of tourism that generates irritation and discomfort among stakeholders. Therefore, it is fundamental for sustainable tourism development to adopt measures that allow for harmonious coexistence between tourists and residents, and that satisfy the needs and expectations of both parties (Mihalic, 2020).

As a result, it is vital to understand the presence of tourismphobia when addressing the problem of overtourism in a tourist destination. This was already considered important since 1979, when Rosenow and Pulsipher recognized three main causes of visitor overload: (1) Too many visitors, possibly aggravated by seasonality; (2) Too much adverse impact from visitors (e.g. noise, disorderly behavior, and other nuisances); (3) Too much physical impact from the tourist economy. Further research confirmed that visitor behavior, timing, concentration, location, experience with tourism, local etiquette, among others, are as important as the quantity of tourists (Koenig, Postma & Papp, 2018).

Academics such as Doxey, Butler, and O'Reilly have focused on the antagonistic relationship that arises between local residents and tourists, the life cycle of the tourist area, and the tourist carrying capacity, respectively. In the last 10 years, some academics have thought of new ideas about tourism, while others have joined social movements that are against tourism growth (Milano, Novelli & Cheer, 2019).

6.1 DOXEY INDEX

George Doxey is a highly recognized author in the field of tourism and has been particularly influential in addressing the issue of tourismphobia. In 1975, he introduced the Doxey Irridex. Doxey's Destination Irritation Index (Irrindex) describes how residents of a destination go through a series of emotions and reactions towards visitors as visitation increases, ranging from euphoria to antagonism.

Spatial economics, according to Butler's concept of the Tourism Area Life Cycle (TALC), shows that destinations experience decline when carrying capacities are reached and the negative impacts of tourism become more evident. Local residents begin to oppose tourism development, and overtourism can generate movements of irritated residents and organized social movements. Similarly, from the perspective of local residents, anti-tourism begins after the destination's carrying capacity is reached and perceptions of quality of life start to decline. Resident satisfaction with tourism growth in terms of visits and impacts turns into dissatisfaction and irritation, resulting in their opposition to development, projects, or tourist presence (Navarro Jurado et al., 2019). In these circumstances, overtourism is met with movements of irritated destination residents acting

against tourism development and social movements that organize to oppose growth projects (Claudio Milano, Marina Novelli, Joseph M. Cheer, 2019).

Therefore, tourismphobia is a phenomenon that is becoming increasingly common in tourist destinations worldwide. The concept of Doxey's destination irritation index helps us better understand how local residents and visitors experience and react to tourism in a particular area. As the number of visitors increases, residents may transition from initial euphoria to irritation and opposition, especially if the destination's carrying capacity has been exceeded. Visitors may also experience anti-tourism or anti-visit sentiment if the quality of the travel experience decreases due to tourism overload. Therefore, tourism management must take these factors into account and work in collaboration with local communities to ensure sustainable and responsible tourism. Otherwise, tourismphobia can damage the destination's image and negatively affect its long-term economy and tourist appeal.

7. POLICIES APPLIED TO OVERTOURISM

In this section, the political implications for mitigating overtourism, as outlined in the article by the European Parliament (2018), will be analyzed. Political implications refer to the policies, programs, or strategies implemented in a destination with the aim of addressing the problem of overtourism and improving the lives of both residents and visitors.

According to the article, 17 categories of political responses at the European level have been identified, along with 121 political measures at the destination level. This section will focus on explaining the following: first, General EU tourism policy principles; second, EU policy response categories; and finally, the political responses applied in Mallorca.

7.1. GENERAL EU TOURISM PRINCIPLES

When it comes to general principles, it is worth noting that since overtourism was not recognized when these principles were developed, they are not directly aimed at preventing overtourism, but many of them potentially contribute to its prevention or reduction. The following are the most relevant principles to mitigate overtourism: First, plan for the long term, which means having the ability to sustain actions in the long term by addressing the needs not only of the present generation but also of future ones. Second, achieve an appropriate pace and rhythm of development, which means that the pace, level, and form of development should respect the character, resources, and needs of the host destinations. Third, involve all stakeholders to ensure a sustainable approach. Fourth, reflect impacts in costs (user and polluter pays), which means that the prices of goods and services should reflect the true costs associated with their production and consumption, including both social and environmental costs. Fifth, set and respect limits where appropriate, which means recognizing the importance of protecting natural and cultural resources and being willing to limit the amount of tourist development and the volume of tourist flows to ensure that

tourism benefits are distributed equitably and sustainably. Lastly, undertake continuous monitoring to understand the impacts and always take care of them to make relevant changes and improvements.

7.2. EU POLICY RESPONSES CATEGORIES

When it comes to political responses to overtourism, there are 17 categories of policy actions defined at the European Union level that can assist destination managers and local governments in adopting measures to mitigate the negative effects of excessive tourism. These actions aim to promote more sustainable tourism practices and protect the natural and cultural resources of local communities. Overtourism can reduce the livability of destinations and lead to environmental degradation and congestion. Therefore, these policies encourage distributing visitors to other places, implementing financial regulations, stopping certain developments, developing uniform traffic regulations, diversifying the economy, promoting high-quality tourism, collaborating between destinations, stimulating developments directed at residents, and improving monitoring and communication with both visitors and local stakeholders. These policies aim to achieve sustainable development in tourism while benefiting both visitors and residents.

With respect to the various categories previously mentioned to alleviate the impact of mass tourism, it is of paramount importance to highlight that a significant number of them are targeted at the resident population of the tourist destination. Their objective is to enhance the interaction between tourists and residents, given that the latter frequently encounter what is referred to as "tourismphobia".

7.3. POLICIES APPLIED IN MALLORCA

In this section, the political implications for reducing over-tourism in Mallorca in order to protect the environment and the quality of life of its inhabitants, as well as to preserve the cultural identity of the island, improve the tourist experience, and reduce hostility from residents towards tourism will be discussed.

In the previous section, the term "tourismphobia" was mentioned, which is of great importance in addressing the issue of over-tourism in Mallorca. This refers to complaints and manifestations by the island's inhabitants, who have protested the negative environmental impacts generated by tourism.

It is worth noting that in the late 1970s, protests arose against tourist development and the construction of a marina on Dragonera Island. On the other hand, in 2018, Mallorca residents initiated a protest at Palma de Mallorca airport to denounce the negative effects of tourism on the island. In addition, a movement against tourism called "a city for those who live in it" is promoting a campaign to de-commercialize tourism.

Furthermore, tourismphobia has intensified due to the water shortage that Mallorca has suffered, largely due to tourism. Additionally, other consequences of excessive tourism, such as the degradation of beaches and landscapes, the rising cost of housing, and the proliferation of tourist accommodations, have increased residents' hostility towards the island's tourist activity.

As for the measures applied, government institutions have used different strategies to address the mentioned problem. First, the "Better in Winter" campaign was implemented with the aim of tackling the problem of seasonality and thus balancing tourist flows.

On the other hand, the Municipal Council of Palma de Mallorca, together with three town councils (Escorca, Pollensa, and Valldemossa), has implemented a strategy against traffic congestion in tourist areas, restricting access and parking in highly saturated areas such as Sa Calobra, Formentor, and Port de Valldemossa.

In addition, to address the real estate bubble, the latest legislation addresses two issues: rules for commercialization and the establishment of a maximum number of licenses for accommodations. This law allows the government to impose sanctions on private properties and on platforms such as Airbnb that engage in tourist rentals. Another measure was the decree-law (13/2017, of December 29, 2017), which established an increase in the Balearic government's eco-tax up to a maximum of 4 euros per day.

The Tourism and Environmental Balance Plan for the period of 2017-2020 encompasses several crucial objectives. These include the promotion of sustainable tourism and the emphasis on winter and spring-to-summer tourism. The plan also encompasses measures aimed at regulating tourist flows, both directly and indirectly, to moderate the peak influx during the summer season. Additionally, efforts are made to alleviate the adverse impacts of mass tourism by addressing the strains caused by human activity. The plan further seeks to enhance the management of natural, energy, and human resources associated with economic activities, particularly within the tourism sector. Lastly, it aims to improve the equitable distribution of resources generated by tourism and enhance the working conditions of individuals employed within the sector.

The current 2015-2025 Tourism Strategic Plan aims for constant growth in tourism with the following goals: improving the tourism sector and the tourist experience, generating more employment, and providing new technologies to consumers while strengthening relationships between the public and private sectors.

8. RECOMMENDATIONS

Despite the implementation of policies aimed at mitigating overtourism in Mallorca, this problem persists due to several factors. On the one hand, tourism is a significant source of income for the island, and thus, some economic interests may conflict with policies that aim to reduce the number of tourists. On the other

hand, tourism is a complex phenomenon that involves multiple actors and factors, and solutions are not simple or easy to implement. Therefore, though policies may be implemented to reduce tourism, a combination of measures and a long-term strategy may be needed to effectively address the problem. The following recommendations are considered necessary to address overtourism:

Firstly, it is recommended to promote the diversification of tourism offerings on the island to attract a greater number of tourists interested in activities other than the typical sun and beach tourism. This approach could encourage the year-round spread of tourism, avoiding the concentration of visitors in certain months of the year. One way to achieve this could be through the promotion of cultural, sports, or nature-based activities, as well as the development of tourism products that showcase the richness and diversity of the island's natural and cultural resources.

Secondly, another recommendation to prevent overtourism in Mallorca is to require accommodations for visitors, allowing for a maximum number of tourists and an adjusted visitation calendar to avoid congestion during certain periods. This would also contribute to balancing the flow of tourism and allow for a more sustainable and beneficial long-term tourism approach. It is important to note that the goal is not to completely limit tourism in Mallorca but rather manage it more effectively and responsibly to protect the environment, culture, and quality of life of local residents (Butler & Dodds, 2019).

Thirdly, a fundamental measure considered necessary is to promote responsible tourism. Responsible tourism fully takes into account current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities (Mihalic, 2020). Therefore, it is important to educate tourists about the importance of sustainable and responsible tourism, for example, through awareness campaigns, information, and education.

Finally, collaboration with the local community is considered necessary to address the problem of overtourism since resident attitudes toward tourists are a key factor in discussing tourist overcrowding. Collaboration with the community is crucial to ensuring that tourism has a positive impact on the local economy and the quality of life of residents. Therefore, initiatives that involve the local community in decision-making related to tourism and allow them to benefit from tourism activity must be promoted. Options include creating local tourism committees to develop tourism policies and strategies, conducting surveys and public consultations to gather opinions from local residents on how tourism affects their community, and implementing education and awareness campaigns to educate residents on how to participate in tourism management in a responsible and sustainable manner.

Conclusions

The measurement of the phenomenon of overtourism in a destination is crucial in order to evaluate its impact and to be able to take measures to protect the environment and quality of life of both residents and tourists who visit the destination. Tourist indicators provide useful tools for collecting and analyzing data on tourism in a destination and allow for an evaluation of its impact on the local community. In this study, various variables such as arrivals and overnight stays on the island have been used. On the other hand, tourist indicators such as density and intensity have been analyzed to determine the existence of overtourism in Mallorca.

Based on the analyzed data from the island of Mallorca, it is observed that the island has experienced a steady increase in the number of tourists from 2011 to 2019, with a slight decrease in the number of overnight stays during the months of June and September. The COVID-19 pandemic caused a significant decrease in the number of tourist arrivals in 2020. Although there has been growth in these levels since 2021, this increase has not yet reached the levels of 2019.

It is also important to highlight the results obtained through the Human Pressure Indicator (PHI) which reveal an increase in the magnitude of the tourism impact in Mallorca, reaching its peak in September 2019. Additionally, the tourist density index shows a progressive increase in the density of tourists in the region, both in its magnitude and intensity, over time.

Overtourism is a complex problem that is influenced by multiple factors. Although there is no exact number that defines the number of tourists that are considered excessive, carrying capacity can be used as an indicator to evaluate whether the level of tourism is sustainable or whether there is dissatisfaction or a high degree of dissatisfaction among tourists and local residents on the island. In this sense, based on the results obtained in the review of these variables, it can be concluded that the island of Mallorca is experiencing overtourism, since the data indicates that there is an excess of tourists in relation to the maximum carrying capacity established by the Consell de Mallorca. Furthermore, due to the issue of tourist seasonality, the high concentration of tourist demand during certain periods of the year can have a significant negative impact on the society and economy of tourist destinations, especially in terms of resident dissatisfaction with this phenomenon.

Therefore, addressing the dissatisfaction of residents is vital in relation to the phenomenon of overtourism, in order to highlight this concern and to promote more sustainable and responsible tourism that protects their rights and preserves the natural environment of the island of Mallorca. To achieve this, the specific characteristics, tourism products and services, and capacity to withstand tourist pressure should be considered in order to avoid tourism overload. It is also essential to implement appropriate measures in territorial policies to ensure that tourism is sustainable and beneficial for both tourists and local residents.

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Annexes

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	1.234.456	1.303.211	1.352.846	1.393.696	1.398.137	1.535.944	1.647.951	1.657.479	1.627.804	43.369	600.267
JULY	1.560.906	1.604.759	1.586.714	1.622.819	1.686.097	1.841.618	1.908.433	1.902.993	1.847.160	522.034	1.118.616
AUGUST	1.529.796	1.520.266	1.626.232	1.729.394	1.756.274	1.784.040	1.882.999	1.813.521	1.776.129	487.668	1.156.520
SEPTEMBER	1.195.202	1.328.585	1.305.739	1.360.886	1.328.985	1.441.996	1.528.460	1.551.771	1.569.384	141.212	955.736

Annex 1. Number of monthly tourist arrivals. Source: own elaboration according to data obtained from IBESTAT (2023)

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
11.323.714	11.317.293	11.356.635	11.515.892	11.827.460	13.090.195	13.943.770	14.502.183	14.840.735	3.045.991	7.250.491

Annex 2. Number of annual tourist arrivals. Source own elaboration according to data obtained from IBESTAT (2023)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	128.826	943.095	946.848	939.095	872.484	895.716	952.111	849.733	770.290		128.826
JULY	1.222.992	1.283.854	1.267.220	1.121.194	1.172.649	1.142.386	1.140.793	1.058.701	917.426	143.669	390.012
AUGUST	1.276.660	1.311.641	1.277.822	1.185.443	1.180.162	1.193.480	1.115.238	1.065.190	948.970	176.879	495.975
SEPTEMBER	960.798	1.000.359	955.917	924.136	902.666	918.327	891.143	834.023	748.487	58.787	366.729

Annex 3. Number of monthly overnight stays.Source: own elaboration according to data obtained from IBESTAT (2023)

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
5.897.568	5.964.951	6.064.907	5.612.403	5.699.714	5.929.677	5.924.441	5.544.444	4.805.307	492.674	1.830.116

Annex 4. Number of annual overnight stays. Source: own elaboration according to data obtained from IBESTAT (2023)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	6,6	6,55	6,47	6,32	6,35	6,2	6,26	5,88	5,77		4,48
JULY	6,81	6,85	6,94	6,81	6,81	6,48	6,32	6,29	6,09	5,16	5,68
AUGUST	7	7,12	6,98	6,96	6,96	6,51	6,58	6,57	6,17	5,06	5,75
SEPTEMBER	7,08	6,65	6,73	6,88	6,88	6,42	6,23	6	5,96	3,58	5,44

Annex 5. Number of stays per month. Source: own elaboration according to data obtained from IBESTAT (2023)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	1.212.791	1.244.833	1.263.562	1.264.907	1.273.901	1.329.928	1.354.408	1.351.480	1.357.424	975.151	1.125.750
JULY	1.327.340	1.362.806	1.365.753	1.371.102	1.402.664	1.441.656	1.459.947	1.457.013	1.460.961	1.140.794	1.264.850
AUGUST	1.347.522	1.382.244	1.381.172	1.405.928	1.423.535	1.458.870	1.473.873	1.457.173	1.465.426	1.142.168	1.289.793
SEPTEMBER	1.233.152	1.254.831	1.262.080	1.273.360	1.302.437	1.323.282	1.333.839	1.326.399	1.346.359	1.004.756	1.192.985

Annex 6. Human Pressure Index for months. Source: own elaboration according to data obtained from IBESTAT (2023)

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1.347.522	1.382.244	1.381.172	1.405.928	1.423.535	1.458.870	1.473.873	1.457.173	1.465.426	1.142.168	1.289.793

Annex 7. Human Pressure Index for years. Source: own elaboration according to data obtained from IBESTAT (2023)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	1.083.965	301.738	316.714	325.812	401.417	434.212	402.297	501.747	587.134	975.151	996.924
JULY	104.348	78.952	98.533	249.908	230.015	299.270	319.154	398.312	543.535	997.125	874.838
AUGUST	70.862	70.603	103.350	220.485	243.373	265.390	358.635	391.983	516.456	965.289	793.818
SEPTEMBER	272.354	254.472	306.163	349.224	399.771	404.955	442.696	492.376	597.872	945.969	826.256

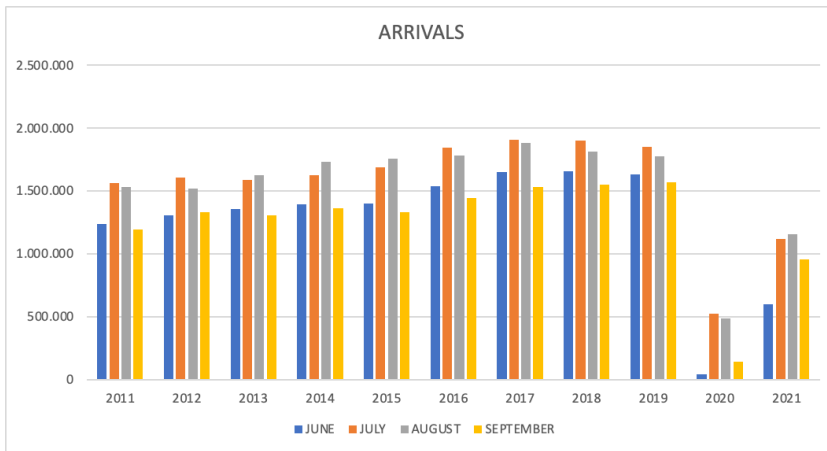
Annex 8. Number of residents per month. Source: own elaboration according to data obtained from IBESTAT (2023)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	35,2947945	258,382192	259,410411	257,286301	239,036712	245,401644	260,852329	232,803562	211,038356		35,2947945
JULY	335,066301	351,740822	347,183562	307,176438	321,273699	312,546027	312,546027	290,055068	251,349589		106,852603
AUGUST	349,769863	359,353699	350,088219	324,778904	323,332055	326,980822	305,544658	291,832877	259,991781		135,883562
SEPTEMBER	263,232329	274,070959	261,895068	253,187945	247,305753	251,596438	244,148767	228,499452	205,064932		100,473699

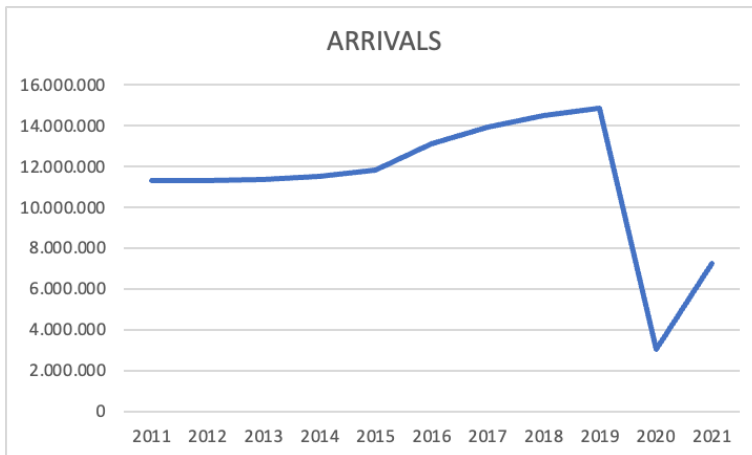
Annex 9. Monthly density index. Source: own elaboration according to data obtained from IBESTAT (2023)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
JUNE	0,1188	3,1255	2,9896	2,8823	2,1735	2,0629	2,3667	1,6935	1,3119	0,0000	0,1292
JULY	11,7203	16,2612	12,8609	4,4864	5,0981	3,8172	3,5744	2,6580	1,6879	0,1441	0,4458
AUGUST	18,0161	18,5777	12,3640	5,3765	4,8492	4,4971	3,1097	2,7174	1,8375	0,1832	0,6248
SEPTEMBER	3,5278	3,9311	3,1222	2,6463	2,2580	2,2677	2,0130	1,6939	1,2519	0,0621	0,4438

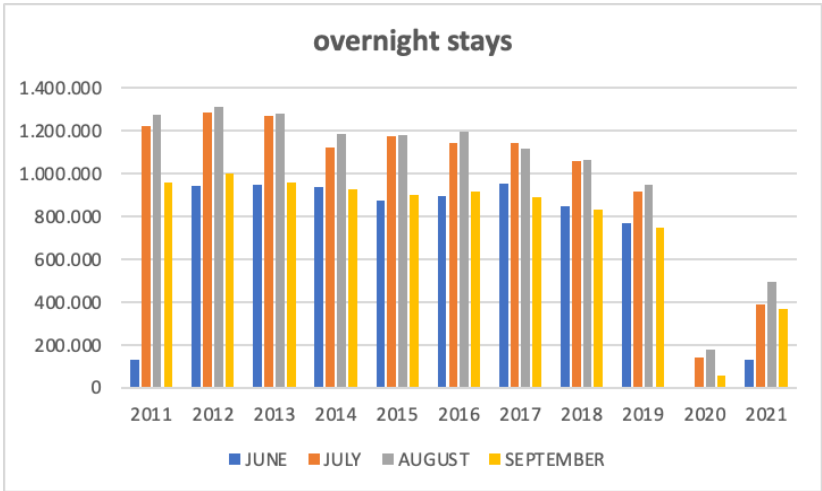
Annex 10. Monthly intensity index. Source: own elaboration according to data obtained from IBESTAT (2023)



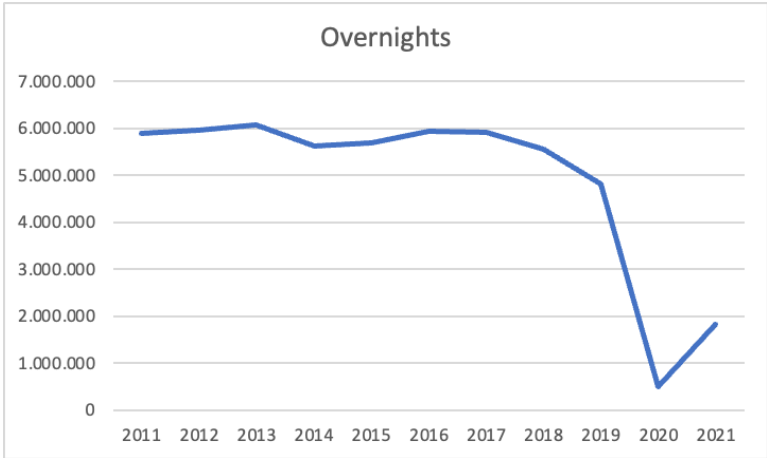
Annex 11. Graphic of number of monthly tourist arrivals. Source: own elaboration according to data obtained from IBESTAT (2023)



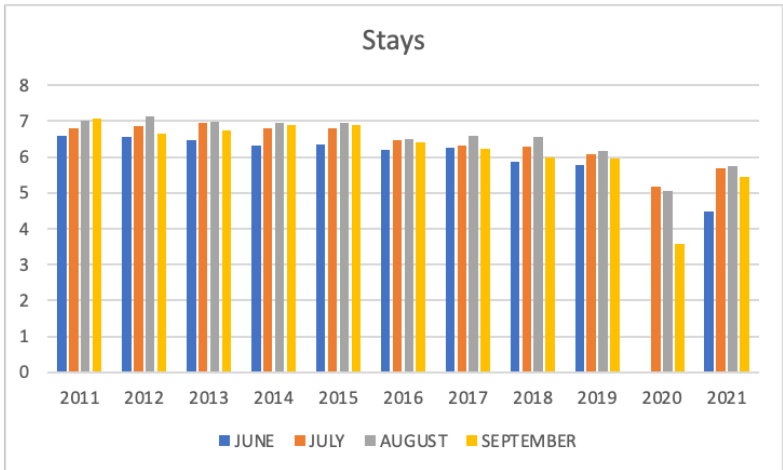
Annex 12. Graphic of number of annual tourist arrivals. Source own elaboration according to data obtained from IBESTAT (2023).



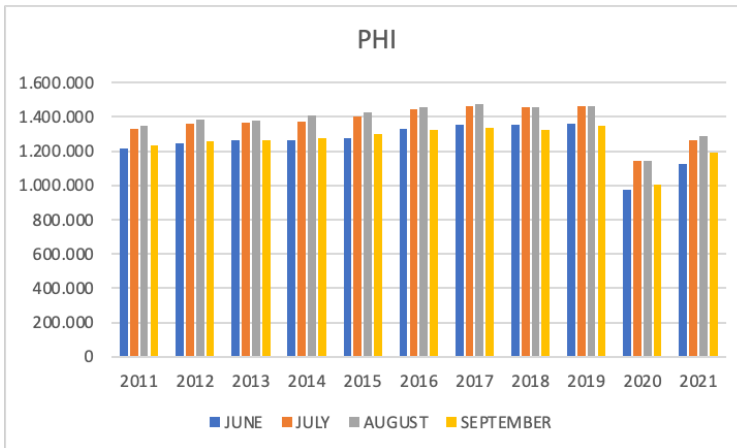
Annex 13. Graphic of number of monthly overnight stays.Source: own elaboration according to data obtained from IBESTAT (2023).



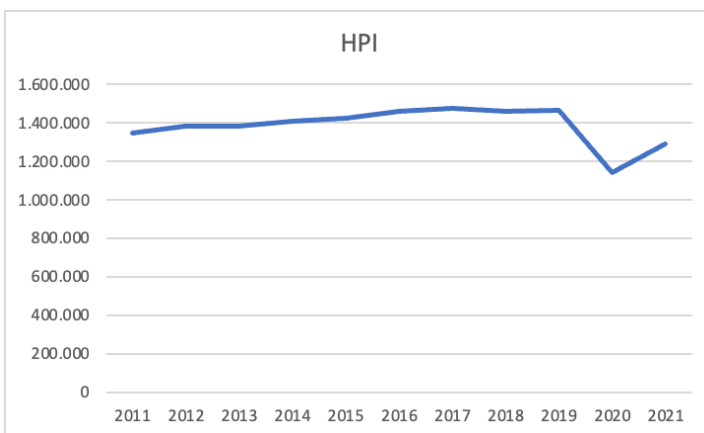
Annex 14. Graphic of number of annual overnight stays. Source: own elaboration according to data obtained from IBESTAT (2023)



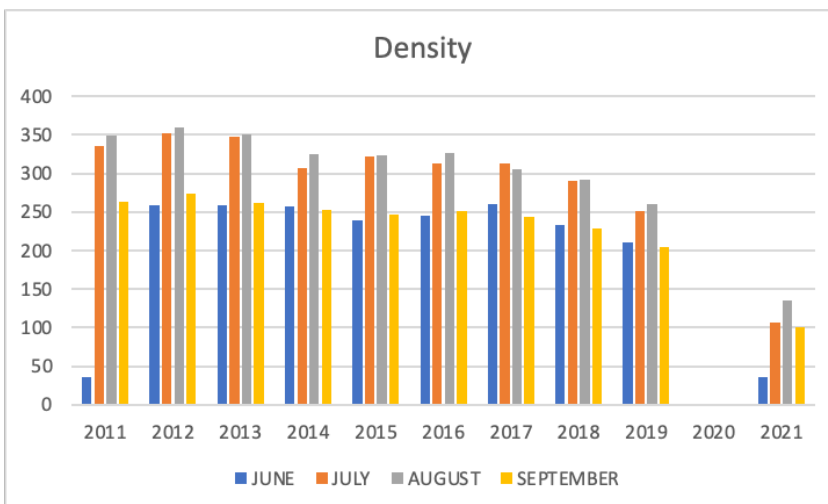
Annex 15. Graphic of number of stays per month. Source: own elaboration according to data obtained from IBESTAT (2023)



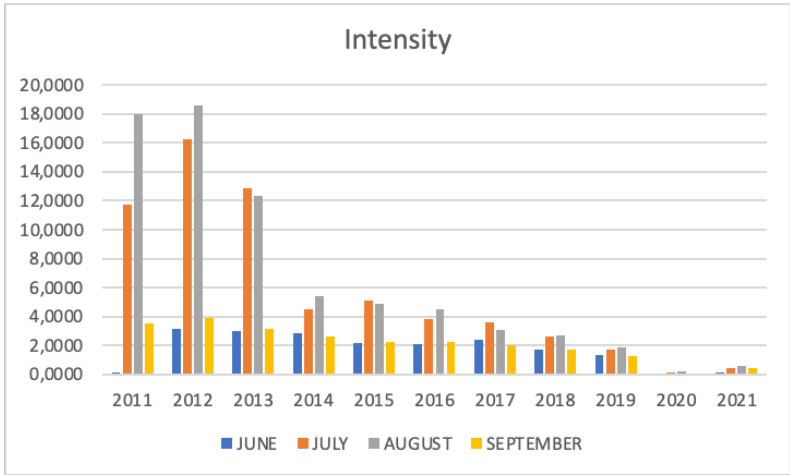
Annex 16. Graphic of Human Pressure Index for months. Source: own elaboration according to data obtained from IBESTAT (2023)



Annex 17. Graphic of Human Pressure Index for years. Source: own elaboration according to data obtained from IBESTAT (2023)



Annex 18. Graphic of monthly density index. Source: own elaboration according to data obtained from IBESTAT (2023)



Annex 19. Graphic of monthly intensity index. Source: own elaboration according to data obtained from IBESTAT (2023)