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# Report and database of PWAs tourism systems

D.1.3.1 – OCTOBER 2023

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## Who should read this report?

The intended audience of this document are:

**Local and Regional Public Authorities**, to increase the awareness regarding the necessity of the analysis of tourism and socio-economic data for strengthening the knowledge base on destinations and tourism systems.

**Local and Regional DMOs**, to increase their understanding of the systemic nature of tourism destinations.

**Tourism SMEs**, to increase their knowledge base regarding their part in the tourism supply (ex. Accommodation) and demand-side changes and evolutions.

**Local communities of STDs**, to increase their understanding of the tourism system, in which they are living and directly and/or indirectly part of.

This report offers an in-depth analysis of the tourism systems of the PWA of the Alpine Space Project “BeyondSnow”. These analyses represent also the informative starting point for the participatory activities of A2.2 (Implementation of co-design laboratories for the development of transition strategies for strengthening STD resilience) and have been transmitted to the project partners in a condensed and presentable way for their utilization during stakeholder workshops. Furthermore, the preceding PWA data collection generated an understanding regarding the data availability on the tourism destination level (presence and absence thereof), which will partly influence the development of the requirements for the quantitative data part of A1.4 (Design of the Resilience Adaptation Model) and A2.1 (Conversion of the RAM to the Resilience Decision-Making Digital Tool (RDMDT)).

This publication is available on the project website <https://www.alpine-space.eu/project/beyondsnow/>

Publication date: October 2023

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## Mission Statements

Assessment of each PWA tourism system based on quantitative and qualitative data.

## Disclaimer

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## Acknowledgements

The authors would like to thank all the members of the Project Partners who contributed their efforts to the data and useful sources collection, and to the proofreading and harmonisation of the texts. Thanks also to our Observers for their support and to the team of the other EU projects related to the CC topic for valuable information exchanges. A special thanks goes to Agnese Moroni, which greatly supported us with the creation of the activity databases as well as the overview maps of all the PWAs and summarized the content of this report for the Project Partners of the project BeyondSnow.

## Acronyms used in this report

BeyondSnow-specific acronyms are **bold**.

Acronym	Meaning
AS	Alpine Space
CC	Climate Change
CCA	Climate Change Adaptation
CCIAV	Climate Change Impact, Adaptation and Vulnerability assessment
CO <sub>2</sub>	Carbon dioxide
DMO	Destination Management Organisation
EC	European Commission
ES	Ecosystem Services
EU	European Union
GIS	Geographic Information System
OECD	Organisation for Economic Co-operation and Development
PA	Pilot Action
<b>PWA</b>	<b>Pilot Working Areas</b>
<b>RAM</b>	<b>Resilience Adaptation Model</b>
<b>RDMDT</b>	<b>Resilience Decision-Making Digital Tool</b>
SME	Small and Medium-sized Enterprises
<b>STD</b>	<b>Snow Tourism Destination</b>
SWT	Snow & Winter Tourism
TG	Target Group
UN	United Nations
UNFCCC	United Framework Convention on Climate Change
VA	Vulnerability Assessment

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# 1 Introduction and background

The present report, part of the deliverable D.1.3.1, comprises an assessment of the tourism systems of the ten Pilot Working Areas (hereinafter PWAs) of the Interreg Alpine Space Project **BeyondSnow**, based on quantitative and qualitative data collected by the responsible project partners (hereinafter PPs). Environmental, physical, as well as social and economic datasets were utilized in order to deliver a proper description of the current situation of the PWAs. Furthermore, D.1.3.1 comprises a Geographic Information System (hereinafter GIS) database of natural & cultural resources of each PWA, which also is utilized as an information basis for A1.4 (specifically regarding the indicators to be inserted in the RAM) as well as A2.1 (specifically regarding the possible initial approximation of the necessary structure of the PWA data). The data collection comprised also additional data, which has been collected within the PWAs, concerning the respective local stakeholders, who will have to be involved during the different phases of the project. This information will be incorporated in the activity A2.2 (Co-design laboratories). The data collection by the PPs was based on the indications of the document D.1.2.1 “PWA data collection: Information document for D.1.3.1”.

The majority of the chapters of the present document feature a similar structure. Each chapter is dedicated to one PWA, and the structure of the respective chapter depends on the availability of quantitative data related to

- T1 – Tourism Demand
- T2 – Tourism accommodation
- Socioeconomic indicators
- Considerations for the future development

In case of the absence of necessary quantitative data, which already became apparent during the initial pre-data-collection activity undertaken in Reporting Period 1 (November 2022 – April 2023), the responsible PP of the PWA was asked to compile the respective chapter based on qualitative and secondary data, provided by the local stakeholders.

The current report is an attempt, to represent the socio-ecological systems of the PWAs, with a special focus on their tourism structure.

## 1.1 Key definitions & concepts

### Accommodation and food service activities Nace Rev 2 Category

This classification encompasses the offering of short-term lodging for visitors and other travelers, as well as the provision of complete meals and beverages suitable for immediate consumption. The range and nature of additional services included in this category can vary significantly (Eurostat, 2008). This category encapsulates the economic impacts of endeavors that are directly tied to the tourism sector, with accommodation being the primary focus and food services playing a substantial role.

Long-term accommodation provided as primary residences is explicitly excluded from this section, as it falls under real estate activities (category L). Additionally, the preparation of food or beverages not intended for immediate consumption, or those distributed through independent channels such as wholesale or retail trade activities, is not considered within this category. The preparation of such items is instead categorized under manufacturing (category C) (Eurostat, 2008).

### Average length of stay

The average length of stay is calculated by dividing the monthly overnight stays by the arrivals, resulting in the average number of days the guests stay within the destination on a monthly basis. Due to the increased resource expenditure during the days of the arrival and departure of guests (because of cleaning and preparation of the rooms, the time used for check-in etc.) as well as the higher traffic of those days, a higher average length of stay entails a minor negative ecologic and economic as well as traffic impact on the destination.

### Gross bed availability

Multiplying the available beds of tourism destinations with the days of the year (365) or the days of the different months yields the gross bed availability. Unfortunately, this indicator does not consider the actual opening and closing days of the accommodation structures (which would be the Net Bed Availability), an information, which oftentimes can either not be obtained or, due to the different opening and closing periods of the accommodation structures, cannot be put in relation of the overall tourism destination.

### Gross bed occupancy

The gross bed availability is used to calculate the gross bed occupancy, which is the relation between available and occupied beds, expressed as the percentage on a yearly or monthly basis. Due to the difficulty of retrieving data, which would generate the Net Bed Availability, this result has to be handled with care, although it can give a general overview regarding the operability of the accommodation structures and their possible margin of improvement in terms of their occupancy rate.

### Gross value added

Gross Value Added (GVA) is characterized by the subtraction of intermediate consumption (at purchaser prices) from output (at basic prices); it serves as the reconciling factor within the production account of national accounts. GVA is analysable based on industry and institutional sector. The total of GVA across all industries or sectors, coupled with taxes on products minus subsidies on products, yields the Gross Domestic Product. The deduction of consumption of fixed capital from GVA results in the corresponding Net Value Added (NVA) (Eurostat, 2023).

### Tourism seasons

Within this report the touristic year is divided between the winter & summer season, allowing for a targeted analysis of the distribution of the bi-seasonal tourism flows between the two major seasons. In this consideration, spring and autumn are treated as tails/shoulder seasons of the respective high season.

- Winter season: From November to April
- Summer season: From May to October

Dividing the arrivals & overnights between the winter and summer seasons, helps to gain further insights regarding the seasonality of the tourism destination.

Contrary to beach tourism destinations, which are mostly mono-seasonal (summer season), mountain tourism destinations have the potential to feature a bi-seasonal distribution of tourism flows (in winter and summer), as well as the extension of their shoulder seasons. This bi-seasonality has an increasing effect on the annual gross bed occupancy of the destination.

### Domestic & foreign guests

Domestic and foreign guests can exhibit quite different travel habits depending for ex. on national holidays, but also on differences in their travel motivation, such as different interests in activities and attractions. Furthermore, a possible long journey to and from the destination, can induce foreign guests to extend their stay within the destination.

## 2 The Pilot Working Areas

The PWAs of BeyondSnow, which are heterogenous in terms of geographical size, population, and tourism intensity, encompass the following areas:

- **Piani d’Erna**, located in Lombardy (IT) and managed by PP02 – LEGAMBIENTE (Legambiente Lombardia)
- **Monesi di Triora**, located in Liguria (IT) and managed by PP03 – POLITO (Polytechnic of Turin)
- **Ala di Stura & Balme**, located in Piedmont (IT) and managed by PP04 – CMTO (Metropolitan City of Turin)
- **Pradibosco**, located in Friuli-Venezia Giulia (IT) and managed by PP05 – CARNIAMOUNT (Mountain Community of Carnia)
- **Werfenweng**, located in Salzburg (AT) and managed by PP06 – PEARLS (EGTC Alpine Pearls Ltd)
- **Bohinj**, located in Gorenjska (SI) and managed by PP07 – RAGOR (Development Agency for Upper Gorenjska)
- **Großer Arber**, located in Bavaria (DE) and managed by PP09 – DIT (Deggendorf Institute of Technology)
- **Métabief**, located in Haut-Doubs (FR) and managed by PP10 – METABIEF (Métabief Ski Resort)
- **Sattel-Hochstuckli**, located in Central Switzerland (CH) and managed by PP11 – SAB (Swiss Center for mountain Regions)
- **Balderschwang**, located in Bavaria (DE) and managed by PP12 – AidA (Community Network “Alliance in the Alps”)

Hereinafter the map of the PWAs:

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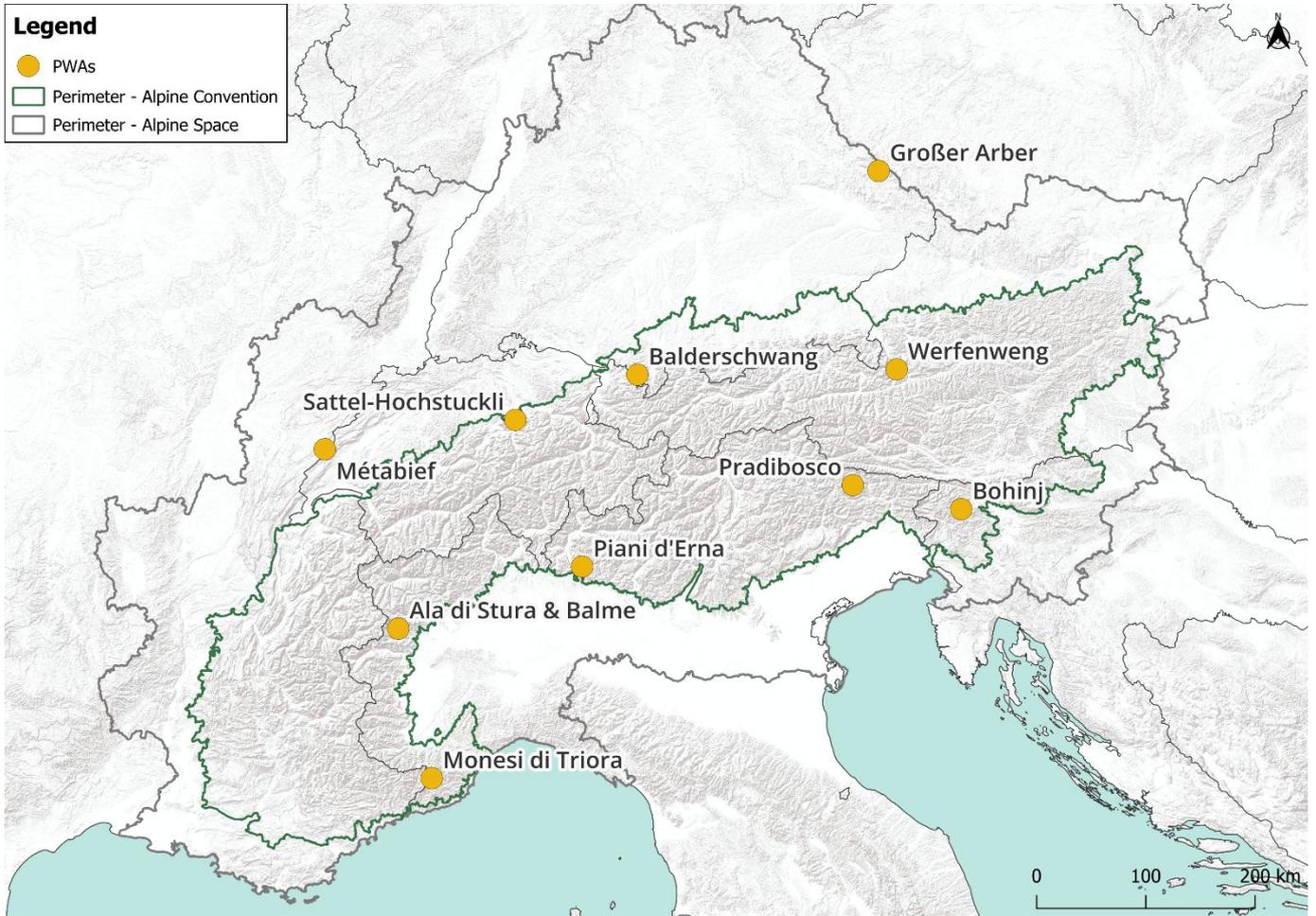


Figure 1: Location of the PWAs of BeyondSnow (Own elaboration)

### 3 PP02 – Piani d’Erna (IT)

The altitude of the PWA extends from 710m to 1,435m, the main height difference being therefore 725m. The PWA is reachable from the city of Lecco solely through a cable car. Currently, the PWA does not feature any skiing infrastructure. Piani d’Erna can be classified mainly as a day-tourism destination. Based on data collected by PP02, besides a small number of apartments, the accommodation landscape seems to be almost non-existent. Administratively and geographically, the PWA is part of the municipality of Lecco, the attractions of which can therefore also be partially considered. Furthermore, Piani d’Erna is part of the tourism consortium “Piani di Bobbio”<sup>1</sup>, which encompasses the destinations Valtorta, Artavaggio & Pian delle Betulle.

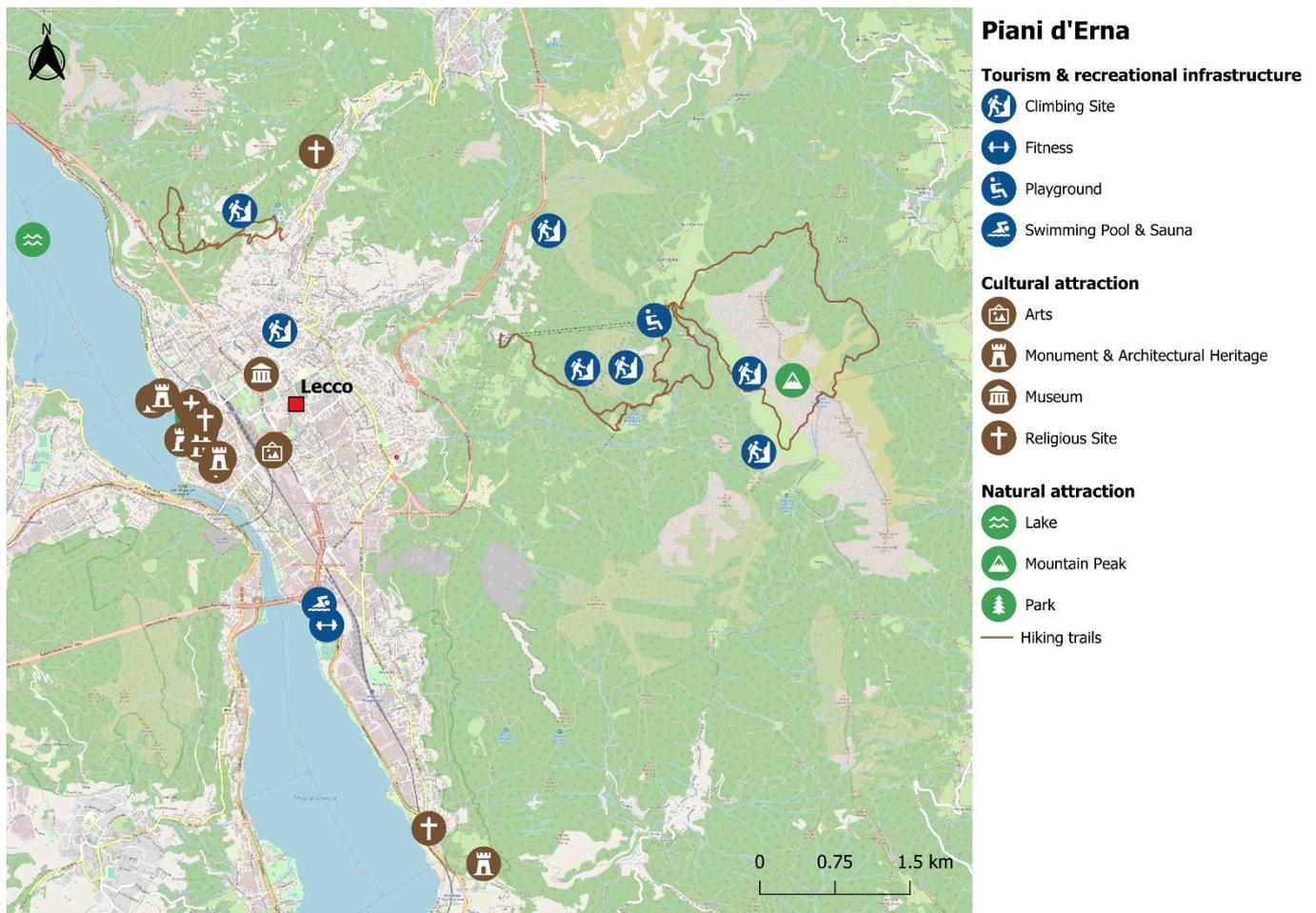


Figure 2: Overview of the Italian PWA Piani d’Erna and its attractions (Own elaboration, based on the data provided by the partner)

<sup>1</sup> <https://www.pianidibobbio.com/en/>

Its main activities and attractions encompass:

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer
Winter hiking	Natural & cultural sites	Natural & cultural sites
		Hiking
		Mountain biking

Table 1: Overview of the activities of Piani d’Erna and its surrounding area, divided into snow-specific, non-snow specific and summer activities.

Being Piani d’Erna part of the city of Lecco, the population of the latter is considered and encompasses 46,831 inhabitants. A small number of permanent inhabitants reside directly in the PWA (12 persons).

### 3.1 TI – Tourism demand

#### 3.1.1 Yearly total and average daily passengers

Being prevalently a day-tourism destination, the tourism flows of Piani d’Erna can be represented by data of the cable car utilization, the main mean of transport to reach the PWA.

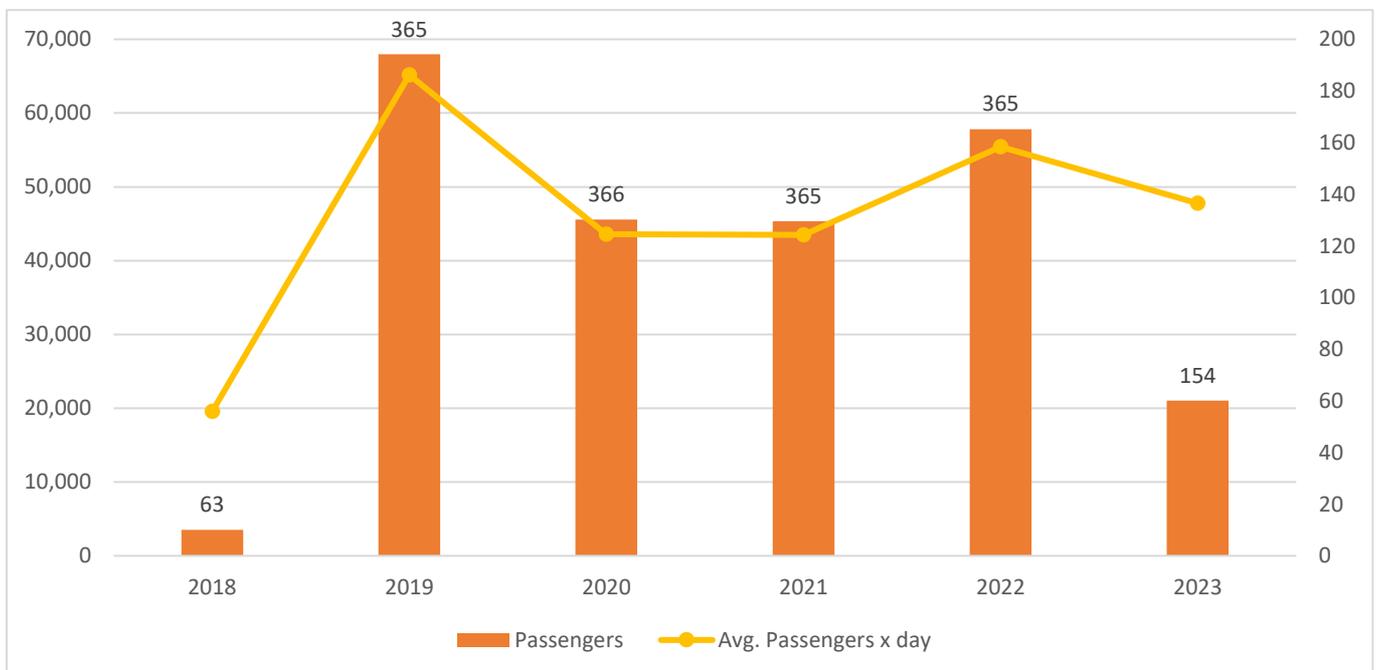


Figure 3: Yearly passengers of the cable car of Piani d’Erna from 2018 to 2023 (Own elaboration, based on data from the cable car operators). The data callout represents the number of days, for which the data was available.

Passenger numbers retrieved from the of the cable car of Piani d’Erna can be utilized for approximating the tourism flows of the PWA. In general, the cable car operates throughout all the months of the year. Therefore, the data is divided between years.

Between 2018 (for this year only the number of passengers from October until December were available) and 2023 (for this year only the number of passengers from January until the beginning of June was available), the year 2019 saw the highest number of passengers (67,959), while during 2022, the second-highest number was registered (57,803). Both years also saw the highest average number of passengers per day, which in 2019 was 186 and in 2022 was 158 passengers. The indicator “average passengers per day” includes the number of days for which data was available, which in both 2019 and 2022 was 365 days.

### 3.1.2 Monthly passengers

By dividing the passages of the different years into monthly passages, an overview regarding the monthly distribution and seasonality of the daily visitors flows of Piani d’Erna can be generated. Although weekly flows were available, it has been decided to combine them into monthly flows, in order to allow for comparisons between the different months of the available years. Hereinafter the figure representing the monthly passenger numbers of the tourism years 2019 (the last complete regular year before the Covid-19 pandemic), 2020, 2021 and 2022 (the latest complete year).

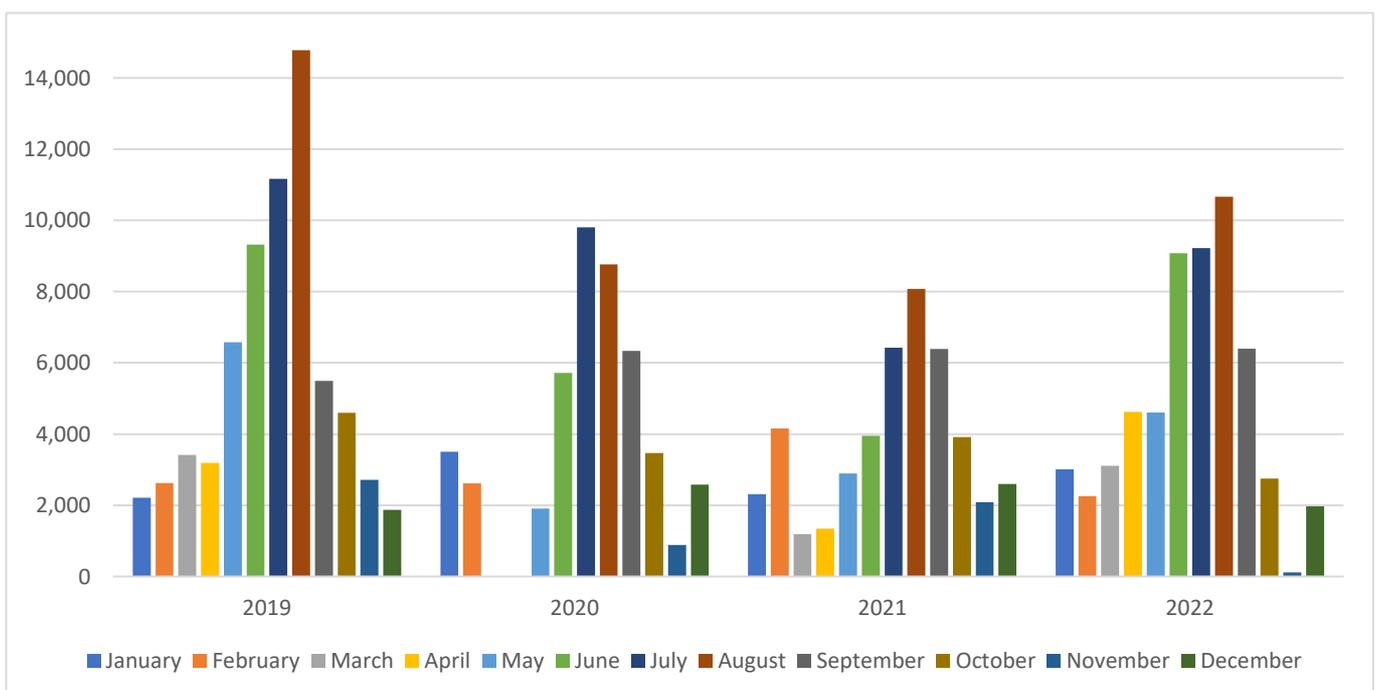


Figure 4: Monthly distribution of passengers from 2019 to 2022 (Own elaboration, based on data from the cable car operators).

Based on the monthly passenger numbers, Piani d’Erna can be categorized as a mono-seasonal destination, with medium shoulder seasons. The cable car works year-round, probably also due to the small number of permanent inhabitants of the destination.

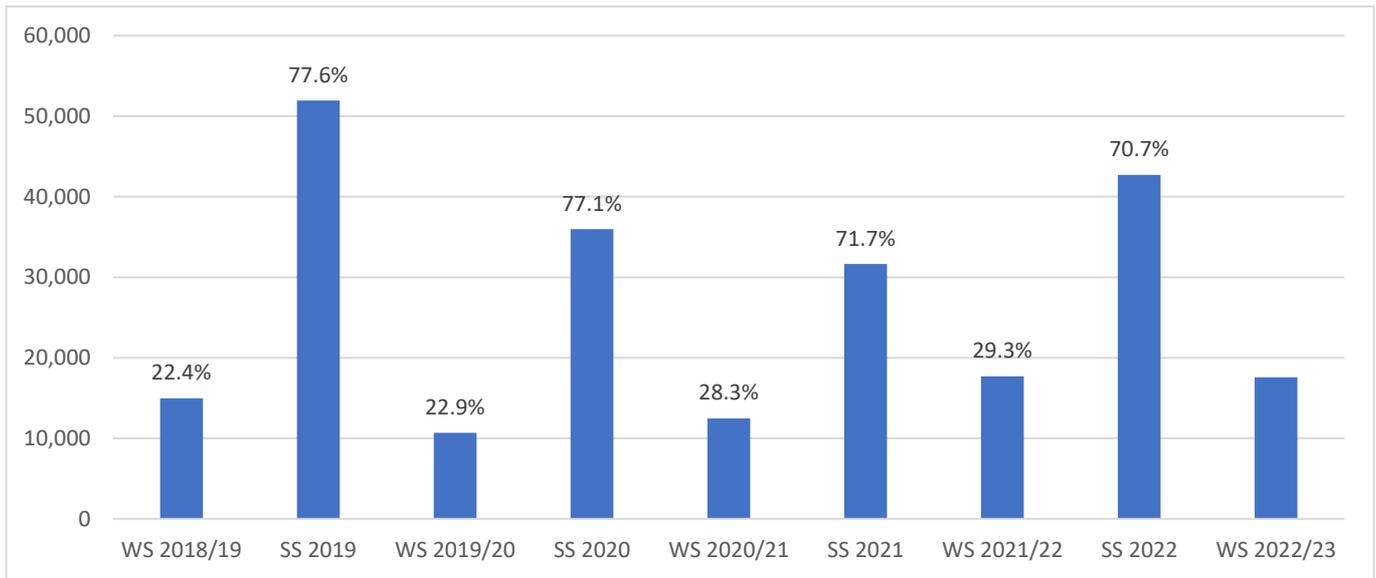


Figure 5: Distribution of the number of passengers between the winter season (November-April) and summer season (May-October) from the year 2018 to 2023 (Own elaboration, based on data from the cable car operators). The data call-out represents the percentage of the passengers comparing the winter and summer season.

Although only the data from late 2018 to early 2023 were retrievable, during those years a slight shift of the passenger numbers from the summer season (May-October) towards the winter season (November-April) can be observed. While 77.6% of the passengers were registered in the summer season of 2019 (and 22.4% were registered in the winter season 2018/19), in the tourism year 2021/22 (November 2021-October 2022) the number of passengers slightly increased in the winter season (November 2021-April 2022), representing 29.3% of passengers, compared to 70.7% of passengers during the summer season (May-October 2022). Due to the low number of available years of data, an actual “trend” can’t be defined, but the most recent numbers show an increase of 17.6% when comparing the winter season 2018/19 (the last “normal” winter season before the pandemic) to 2022/23 (the first “normal” winter season after the pandemic): from 14,968 passengers in the winter season 2018/19 to 17,601 passengers in the winter season 2022/23).

### 3.1.3 Weekly passengers of the years 2019 & 2022

The data retrieved from the cable car of Piani d’Erna was divided into number of passengers per week (Monday to Sunday).

This level of detail allowed the comparison of the weekly passenger number between the year 2019 and 2022, which can give further insights regarding the day-tourism flows of the PWA.

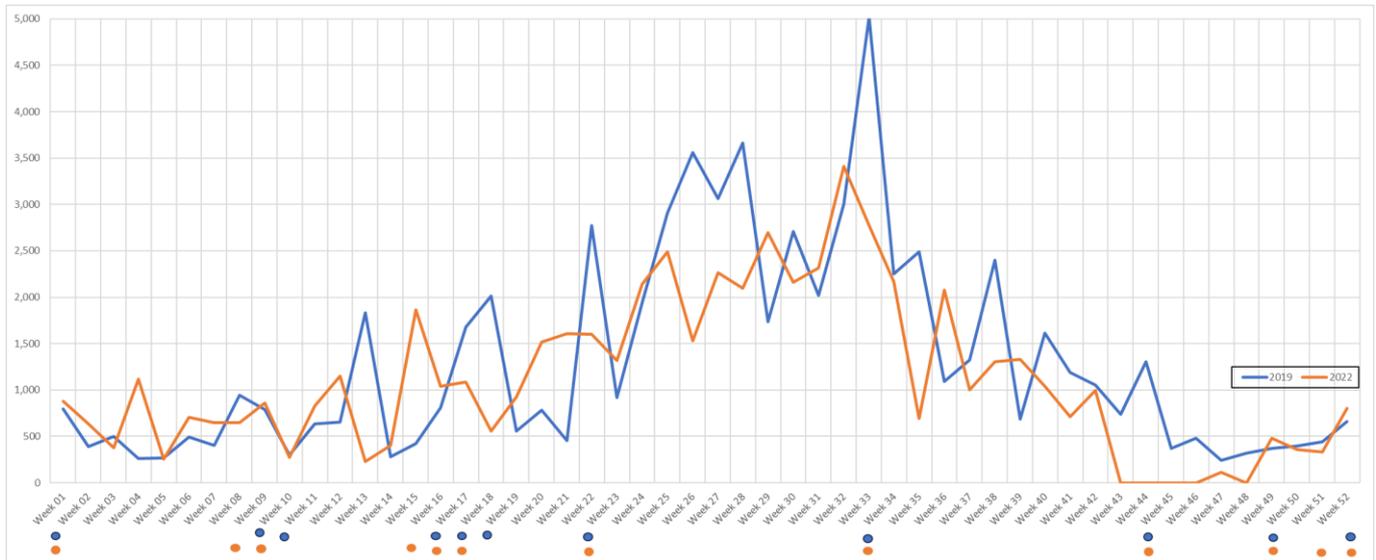


Figure 6: Weekly passages of the years 2019 (blue line) and 2022 (orange line) with emphasis on Italian national holidays (2019: Blue dots; 2022: Orange dots) (Own elaboration, based on data from the cable car operators).

In order to partially account for data “spikes”, the dates of main Italian national holidays have been retrieved for the years of 2019 and 2022. Due to the absence of information regarding other nationalities of passengers, the focus of this representation has been laid solely on the Italian holidays. Within the above figure, the weeks within which Italian national holidays fell are highlighted by a blue dot (Italian national holidays 2019) and orange dot (Italian national holidays 2022) at the bottom of the figure.

The holidays only partly explain data spikes of passenger numbers (For 2019: weeks 17, 18, 22, 33, 44, 52. For 2022: 09, 15, 22, 49, 52). Other spikes are either before (For 2019: week 08. For 2022: weeks 21, 32) or after national holidays (For 2019: week 11). For 2022, week 32 (the week before the most important national holiday in the summer, which is “Ferragosto” on the 15<sup>th</sup> of August), represented the week with the highest passenger numbers of 2022 (3,408 passengers).

Other spikes do not seem to be related to Italian national holidays (For 2019: weeks 13, 26, 28, 30, 38, 40, 46. For 2022: weeks 04, 06, 12, 20, 25, 27, 29, 36, 38, 39, 42). These high passenger numbers could be connected to the presence of foreign daily visitors, particularly favourable weather conditions and/or events. The reasons for these spikes should be investigated further, in order to identify additional attractiveness potential. Furthermore, “similar” spikes of the years 2019 and 2022 should also be looked at, for ex. week 30 in 2019 and week 29 in 2022 as well as week 38 in 2019 and week 36 in 2022.

The holidays have been inserted in the following table, together with the detailed weekly passages:

Holiday	2019					2022				
	Date	Day	CW	CW dates	Weekly passages	Date	Day	CW	CW dates	Weekly passages
New Year's Day	01.01	Tues	01	31.12.-06.01.	796	01.01	Sat	52	27.12.-02.01.	719
Epiphany	06.01	Sun				06.01	Thur	01	03.01.-09.01.	878
Carnival	28.02	Thur	09	25.02.-03.03.	791	24.02	Thur	08	21.02.-27.02.	647
	05.03	Tues	10	04.03.-10.03.	300	29.02	Tues	09	28.02.-06.03.	857
Easter	21.04	Sun	16	15.04.-21.04	808	17.04	Sun	15	11.04.-17.04.	1,862
	22.04	Mon	17	22.04.-28.04.	1,676	18.04	Mon	16	18.04.-24.04.	1,041
Liberation Day	25.04	Thur	17	22.04.-28.04.	1,676	25.04	Mon	17	25.04.-01.05.	1,087
Workers' Day	01.05	Wed	18	29.04.-05.05.	2,012	01.05	Sun			
Republic Day	02.06	Sun	22	27.05.-02.06.	2,770	02.06	Thur	22	30.05.-05.06.	1,600
Assumption Day	15.08	Thur	33	12.08.-18.08.	5,019	15.08	Mon	33	15.08.-21.08.	2,776
All Saints' Day	01.11	Fri	44	28.10.-03.11.	1,303	01.11	Tues	44	31.10.-06.11.	0
Immaculate Conception	08.12	Sun	49	02.12.-08.12.	370	08.12	Thur	49	05.12.-11.12.	478
Christmas Day	25.12	Wed	52	23.12.-29.12.	660	25.12	Sun	51	19.12.-25.12.	329
St. Stephen's Day	26.12	Thu				26.12	Mon	52	26.12.-01.01.	805

Table 2: Weekly passages in comparison to Italian national holidays for the years 2019 and 2022 (Own elaboration, based on data from the cable car operators).

Within the above table, also the days of the week on which each holiday fell have been included. The reason for this is, that, depending on the weekday of the holiday, visitors can be inclined to take additional free days (e.g., bridging days), if the holiday falls favourably (for ex. national holiday on Tuesday or Thursday), which can influence the weekly passenger numbers.

The highest number of weekly passengers ever recorded, was on the week of the Assumption Day 2019 ("Ferragosto", 15<sup>th</sup> of August, week from the 12.08 to the 18.08.19), which amounted to 5,019 passengers.

### 3.2 Considerations for the future development

- Piani d'Erna is and will be also in the future a day-tourism destination, featuring a very low number of accommodation structures.
- Day-tourism destinations are highly dependent on the weather conditions, since visitors can quickly decide whether visiting the destination or choose alternative destinations and activities based on the climatic conditions.
- Due to its geographical proximity to the city of Lecco, an important target group of possible daily visitors of the PWA are also the inhabitants of the city (46,831 inhabitants).
- Based on the data retrieved from the cable car operators, the year 2022 registered 10,000 passengers less than 2019 (2022: 57,803 vs. 2019: 67,959)
- The reasons for data spikes of weekly passenger numbers (especially those not connected to Italian national holidays) should be investigated further, in order to identify additional attractiveness potential. Furthermore, "similar" spikes of the years 2019 and 2022 should also be looked at, for ex. week 30 in 2019 and week 29 in 2022 as well as week 38 in 2019 and week 36 in 2022.



- Due to its small area, low number of attractions and activities, absence of accommodation structures as well as its proximity to the city, Piani d'Erna should be seen not as a tourism destination itself, but as a part of the tourism product of Lecco.
- A stronger communicative and product-specific linkage between the city and the PWA could be beneficial for both entities. Hereby, the tourism portfolio of Lecco could be enriched by the additional integration of mountain tourism products of the PWA and the quite unique characteristic to “get from the (“Mediterranean”) lake to the mountain in a short amount of time”. Besides offering additional activities, the tourism areas of the PWA can also help to relieve the city of some of the tourism flows during high seasons.

## 4 PP03 - Monesi di Triora (IT)

Monesi is a small hamlet, administratively shared by two municipalities (Mendatica and Triora) and is located in the Ligurian Alps at the bottom of the mountain Saccarello (altitude 1,376 m). Currently it has no resident inhabitants.

Its proximity to the province of Cuneo (Piedmont) and France means that it is influenced by different cultures and that, in some respects, its culture and dynamics are closer to the neighbouring regions rather than those of the Liguria region.



Figure 7: Overview of the Italian PWA Monesi di Triora (red dot) (Elaboration by PP03)

### 4.1 Territorial extension of the PWA

Monesi occupies an ambivalent position: geographically it is located in the Arroscia Valley (as well as Mendatica) and takes part in its dynamics. From the administrative point of view, it is split between the Arroscia Valley and the Argentina Valley (where Triora is situated).

To physically go from the Argentina to the Arroscia Valley you need to follow the street next to the coast. This means that Monesi di Triora refers to an area located between a two-hour drive.

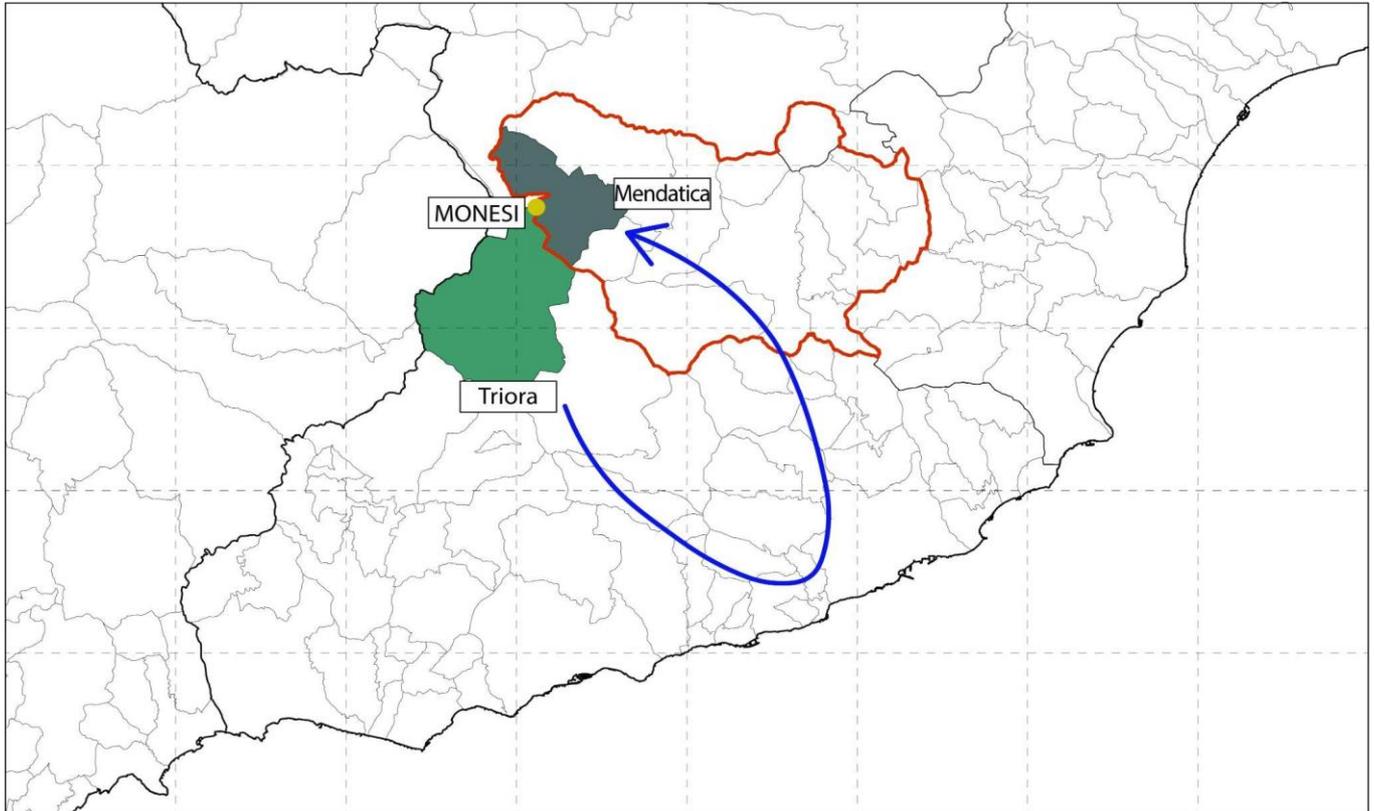


Figure 8: Location of Monesi (Elaboration by PP03)

The different systems constituting the territory have to be articulated by defining each case through variable geometries. The set of these territorial geometries composes the entire system in a variable way, thus constituting the basis on which development projects can be introduced and policies can be created and launched, based on the individual project.

In the case of the BeyondSnow project, the PWA analysis has been extended to the territory of the Arroscia Valley, a valley in which Monesi di Triora fits geographically and culturally and constitutes an important part of its dynamics.

## 4.2 Development of the PWA

Monesi di Triora initiated its ski tourism development in the 1950s, during which the first lifts were built.

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- **2008:** plant opening Chairlift 3 Pini, property of the plant Province of Imperia
- **2016 Novembre:** flood (landslide on the hamlet of Monesi and Piaggia)
- **2019:** elaboration "Programme of Relaunching the Monesi District" by the Municipality of Mendatica, Province of Imperia, Municipality of Triora, Municipality of Briga Alta
- **2019:** task force for the throws again of Monesi on initiative of the Liguria Region
- **2020 September:** storm Alex
- **2022:** maintenance, repair, road repair carried out on roads (SP3, SP74, SP100, SP154, SP88) by the Province of Imperia
- **Ongoing:** urban variant with the identification of ski areas by the Municipality of Triora
- **Ongoing:** further maintenance works on the road by the Province of Imperia

After a period of prestigious development, serious climatic events have contributed to the decline of the ski area, leaving remnants and traces of its past on the territory: disused lift infrastructure, a high number of second homes abandoned, hotels and a territory left without inhabitants.

Currently no residents are registered in Monesi. The only existing chairlift has not seen a utilization for several years. It was initially affected by the floods that hit the territory, and then by the lack of snow caused by climate change.

In addition, the facility, as well as the slopes, are located on an area subject to landslide events.

Figure 9: The situation of the receptivity (Elaboration by PP03)

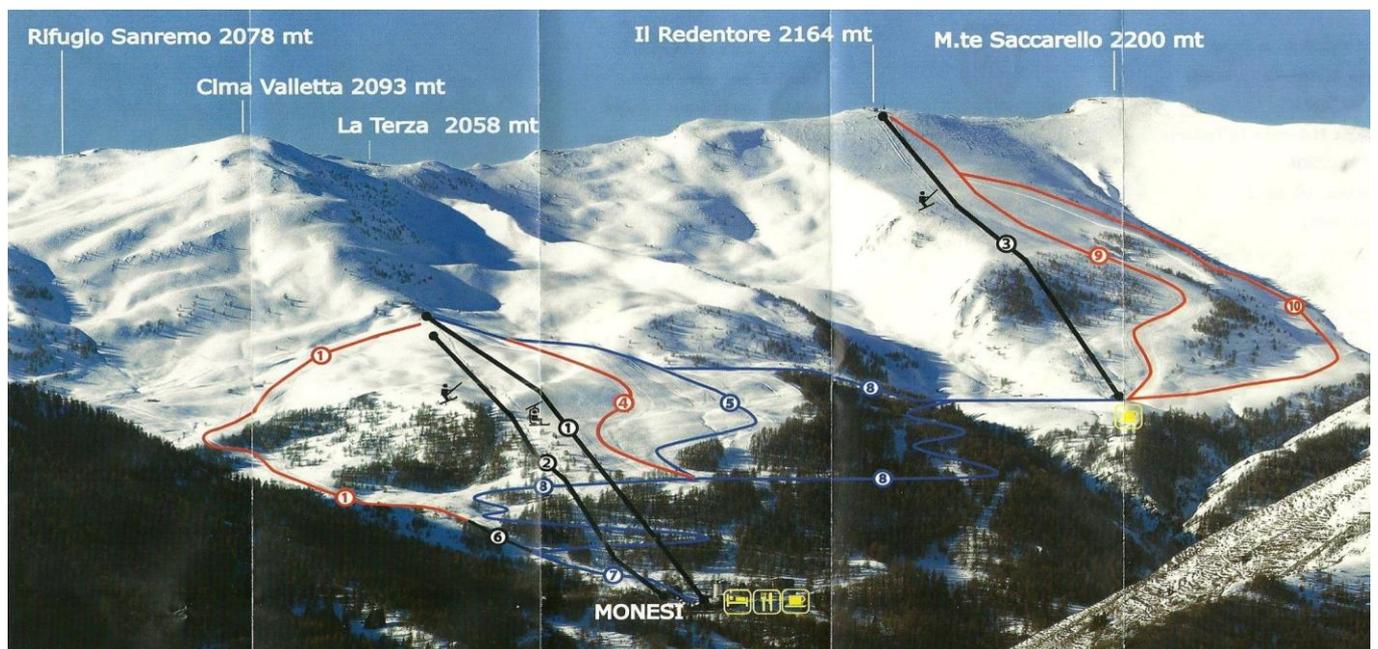


Figure 10: Liguria-Piemonte ski links situation until 2016



Figure 11: Picture of Monesi di Triora

With the decline of winter tourism, Monesi lost its major tourism attractiveness. Furthermore, ancillary economic activities also ceased to exist.

However, Monesi has the privilege of being in a territory with a very high potential, mainly due to its richness of cultural and natural attractivity, which is gradually rediscovered and reactivated through specific events.

### 4.3 Accommodation structures

The information regarding the accommodation structures was retrieved through online searches (Google Maps, Tripadvisor, Airbnb, Booking, AirDNA) and telephone interviews.

Currently, on the territory of the Arroscia Valley there are several types of accommodation structures, that include 2- or 3-Star hotels, B&B, agritourism, mountain huts and one hostel (in the town of Pornassio, as part of a Salesian structure). The municipalities with the greatest number of accommodation structures are Mendatica, Pieve di Teco and Pornassio.

Regarding Monesi there are three accommodation structures, one of which located in the territory of the village of Monesi di Triora, which is “La Vecchia Partenza”, offering both overnight service and catering,

and two mountain huts at high altitude: the refuge La Terza (2.049 m) with accommodation and catering service and the bivouac Sanremo (2.056 m). In the territory of Monesi di Mendatica there are no accommodation facilities.

	Hotel (2/3 stars)		B&B		Farmhouses		Camping		Mountain huts		Hostels	
	n. structures	n. beds	n. structures	n. beds	n. structures	n. beds	n. structures	n. pitches/bungalows	n. structures	n. beds	n. structures	n. beds
Aquila d'Arroscia	2	-	-	-	-	-	-	-	-	-	-	-
Armo	-	-	-	-	-	-	-	-	-	-	-	-
Borghetto d'Arroscia	-	-	1	6	-	-	-	-	-	-	-	-
Cosio d'Arroscia	-	-	-	-	-	-	-	-	-	-	-	-
Mendatica	1	-	-	-	1	14	-	-	1	20	-	-
Montegrosso Pian Latte	-	-	-	-	1	10	-	-	-	-	-	-
Pieve di Teco	1	-	3	16	1	9	-	-	-	-	-	-
Pornassio	4	>47	1	5	-	-	2	>40	-	-	1	125
Ranzo	-	-	-	-	2	26	-	-	-	-	-	-
Rezzo	-	-	-	-	1	9	-	-	-	-	-	-
Vessalico	-	-	-	-	-	-	-	-	-	-	-	-
Monesi di Triora (+high altitude)	1	13	-	-	-	-	-	-	2	>40	-	-
Piaggia	-	-	1	8	-	-	-	-	-	-	-	-
<b>Total</b>	<b>9</b>	<b>&gt;60</b>	<b>6</b>	<b>35</b>	<b>6</b>	<b>68</b>	<b>2</b>	<b>&gt;40</b>	<b>3</b>	<b>&gt;60</b>	<b>1</b>	<b>125</b>

Figure 12: Accommodation structures on the territory of the Arroscia Valley (Elaboration by PP03, based on data from ISTAT, 2023)

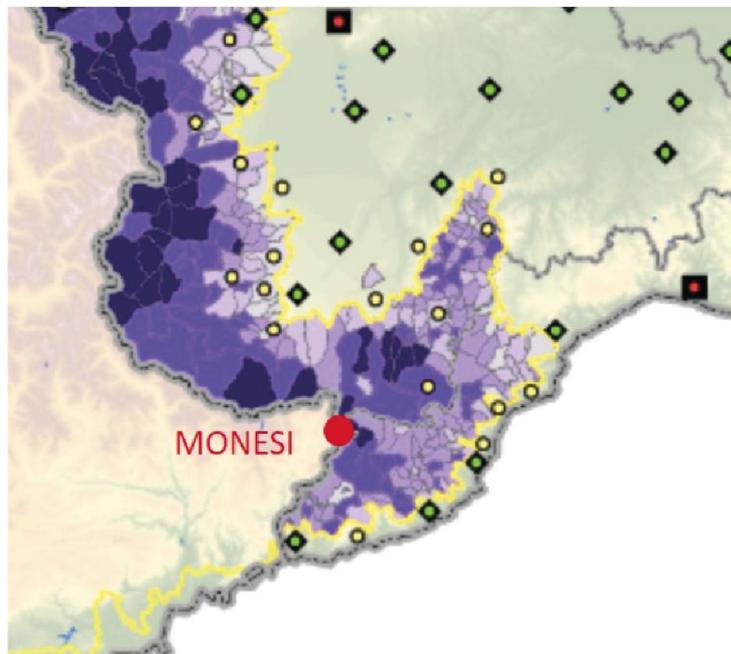
In addition, several apartments can be rented, representing an additional accommodation opportunity, combined with the idea regarding tourists living as a local. It's a reality that exceeds any other type of accommodation about the total number of beds. The collection of data relating to rental houses was carried out through a cross-check on [www.booking.com](http://www.booking.com), [www.airbnb.it](http://www.airbnb.it) and [www.airdna.com](http://www.airdna.com).

	Houses for rent	
	n. structures	n. beds
Aquila d'Arroscia	-	-
Armo	-	-
Borghetto d'Arroscia	13	55
Cosio d'Arroscia	-	-
Mendatica	4	-
Montegrosso Pian Latte	-	-
Pieve di Teco	20	103
Pornassio	-	-
Ranzo	8	37
Rezzo	8	33
Vessalico	5	-
Monesi di Triora (+high altitude)	-	-
Piaggia	-	-
<b>Total</b>	<b>&gt;58</b>	<b>&gt;228</b>

Figure 13: Houses for rent in Valle Arroscia (Elaboration by PP03)

Within the analysed sites in Monesi, no apartments for rent have been identified. The infrastructural stock consists mainly of second homes and unused accommodation, although the most recent data regarding second homes unfortunately refers only to the year 2001 (Corrado et al., 2014).

In general, non-commercial accommodation activities are predominant throughout the territory, and tourism flows are starting to increase, most of all guests interested in a direct contact with nature and in sociocultural aspects of these places.



**Value % of dwellings not occupied 2001**

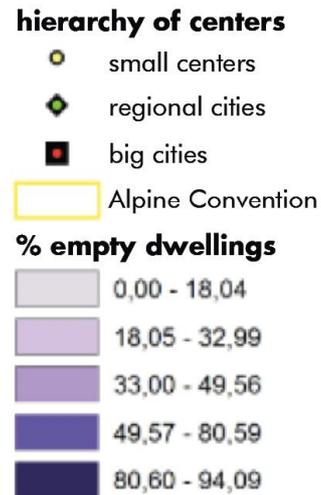


Figure 14: Percentage of second homes, Italian Alps - 2001 (Source: Corrado et al., 2014)

### 4.4 Considerations for the future development

- From the interviews carried out with the tourism stakeholders and accommodation providers it has been deduced that the tourism in the Arroscia Valley can be defined as transit tourism with overnight stays, potentially resulting in short average lengths of stay, mostly linked to the different outdoor activities that can be practiced within the territory.
- The high quality of the landscape, the proximity to the sea and the possibility of reaching Piedmont and France via trails, results in the (potential) attractiveness of mountain bikers and hikers from all over Europe. Based on this evolution, tourism actors, who used to work with winter tourism, have been adapting by renting equipment for outdoor sports and guiding tourists for outdoor activities.
- The territory also offers number of small museums about local traditions, but currently they are not recognized in the museum network. Therefore, their attractive potential is not yet fully exploited, due to poor advertising and valorisation.

## 5 PP04 – Ala di Stura & Balme (IT)

The altitude of the PWA extends from 800m (Ala di Stura) to 3,676m (Uja di Ciamarella), its height difference being 2,876m. Currently the destination features no skiing infrastructure, also due to a fire in 2019<sup>2</sup>.

Its main activities and attractions encompass the following:

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer
Cross-country skiing	Natural & Cultural sites	Natural & Cultural sites
Snowshoe hiking	Gastronomy	Hiking / trekking
Winter hiking		Climbing
Ice climbing		Fishing
Ice skating		

Table 3: Overview of the activities of Ala di Stura & Balme, divided into snow-specific, non-snow specific and summer activities

Currently Ala di Stura & Balme has an overall population of 581 inhabitants. Its number of 2<sup>nd</sup> homes encompasses 1,700 units.

<sup>2</sup> <https://torinocronaca.it/news/provincia/255382/gli-impianti-sotto-sequestro-ala-di-stura-resta-senza-sci.html>

## 5.1 TI – Tourism demand

### 5.1.1 Yearly arrivals & overnight stays

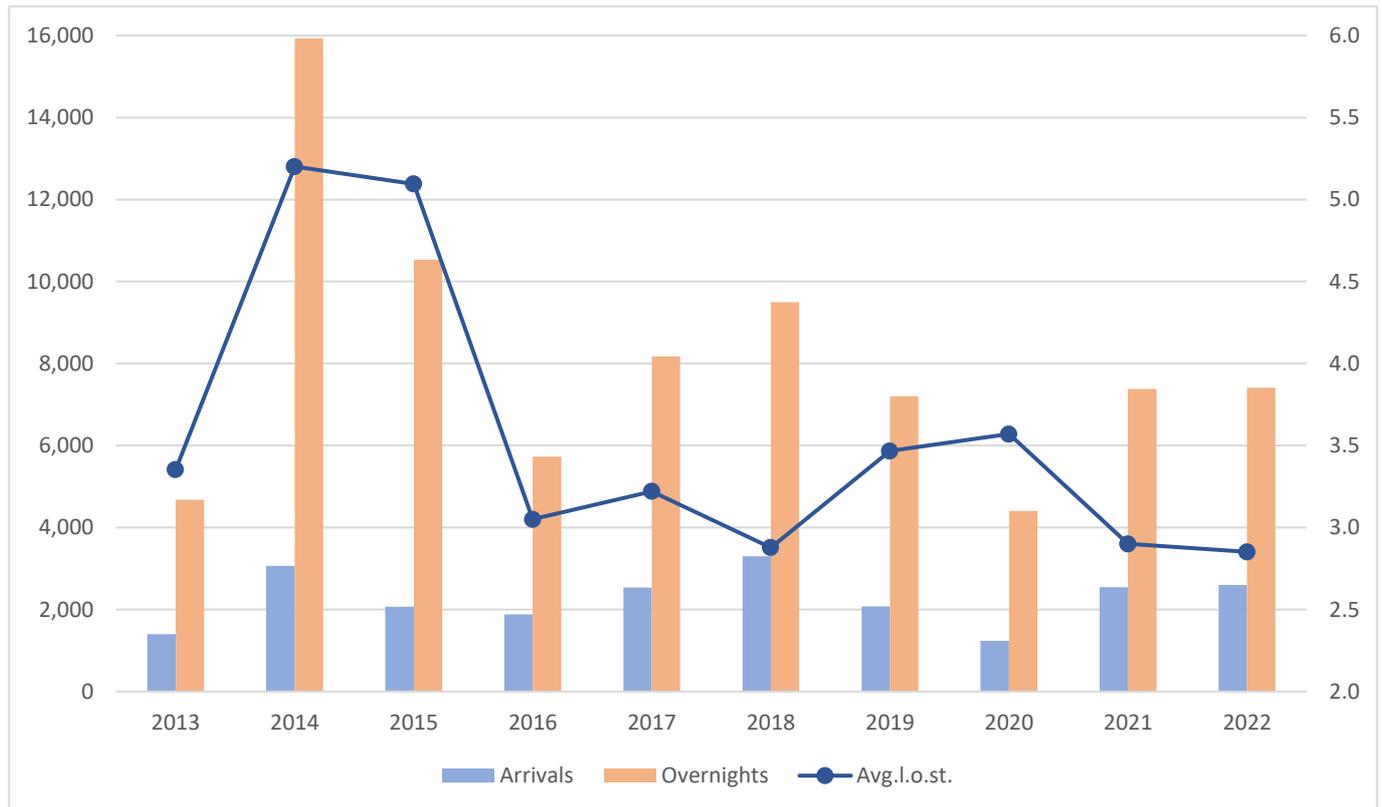


Figure 15: Year arrivals, overnight stays, and average length of stay from 2013 to 2022 (Own elaboration, based on data from ISTAT, 2023).

The yearly number of arrivals and overnight stays between the years 2013 and 2022 saw quite high fluctuations, above all the year 2014, during which the highest number of overnights (almost 16,000) of the last 10 years were registered (ISTAT, 2023). Another interesting aspect of that year is that, according to the provided data, the overnights grew by 240% in respect to 2013, while the arrivals grew “only” by 120%. This growth rate divergence resulted in the highest average length of stay of this decade, which amounted to 5.2 days. After the year 2016, the overnights fluctuated between 7,000 and 9,000 overnights (except for the Covid-year 2020), while the average length of stay between 2.8 and 3.5 days.

Due to the slow recovery phase of the domestic and international tourism flows, the first representative year after the pandemic is considered to be 2022. In 2022 in Ala di Stura & Balme 2,598 arrivals and 7,409 overnight stays were registered, resulting in an average length of stay of 2.85 days. Between 2013 and 2022 the arrivals grew by 86%, the overnights by 58%. The minor increase of the overnights in comparison

to the arrivals resulted in a diminishment of the average length of stay from 3.35 days in 2013 to 2.85 in 2022. This means that on average overnight guests spent less nights during their vacation in the destination.

In respect to 2019 (the last year before the pandemic), 2022 saw an increase of arrivals (+25%) and a minor increase of overnights (2.9%). Also here the major increase of the arrivals in comparison to the overnights resulted in a decrease of the average length of stay from 3.47 days in 2019 to 2.85 days in 2022.

### 5.1.2 Arrivals & overnight stays: Winter & summer season

In Ala di Stura & Balme the tourism flows are distributed between the winter and summer season in the following way:

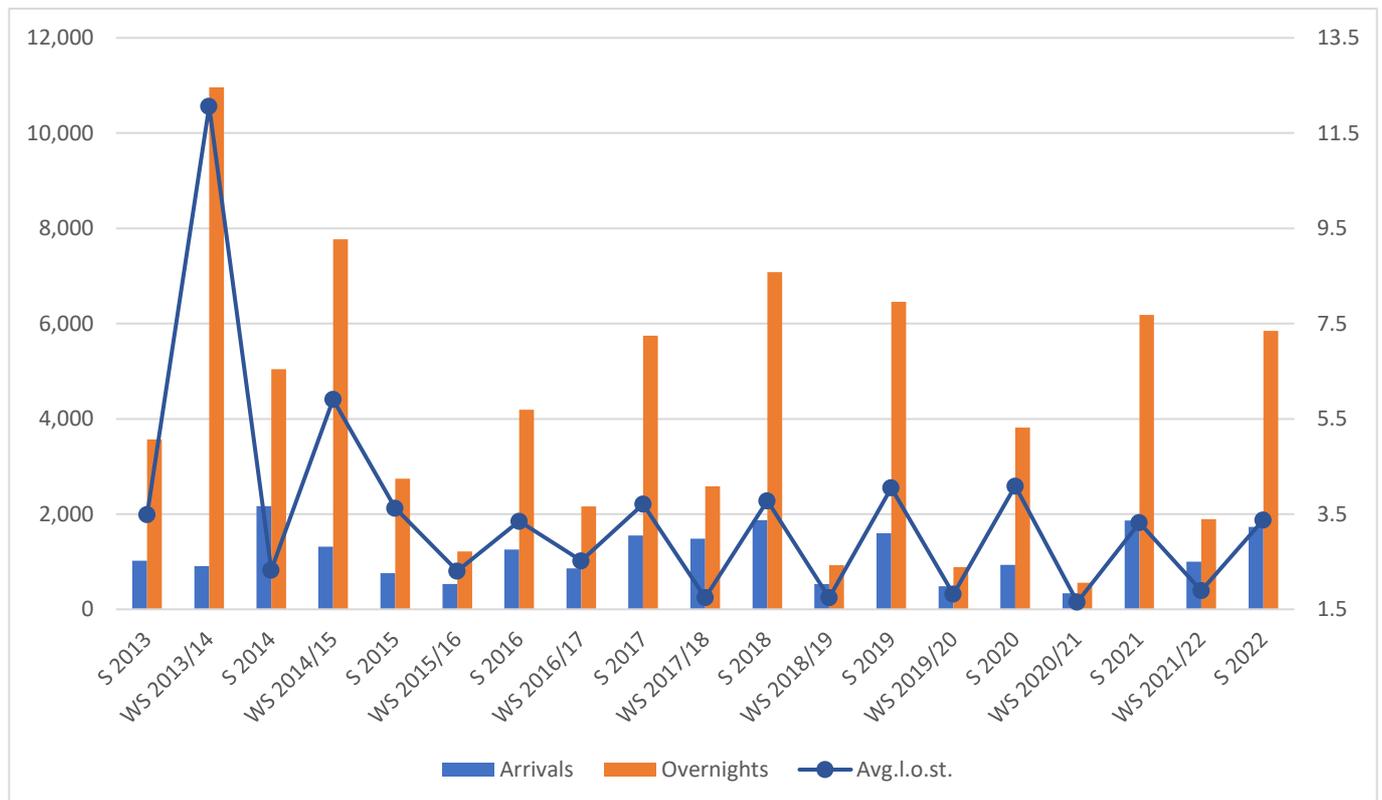


Figure 16: Arrivals, overnight stays and average length of stay divided between winter & summer seasons from 2013 to 2022 (Own elaboration, based on data from ISTAT, 2023)

Relating to the arrivals & overnights, Ala di Stura & Balme exhibit a stronger summer season in comparison to the winter season, with the exceptions of the WS 2013/14 and WS 2014/15, which furthermore represent the two tourism seasons with the highest numbers of overnights (the former with 10,964 overnights and the latter with 7,768 overnights). These two seasons also exhibited the highest average length of stay with 12 days and 5.9 days respectively. Besides these two outlier seasons, in the last decade more than ¾ of the overnights are generated during the summer seasons.

Hereinafter a comparison of the monthly overnights between the years 2019 and 2022:

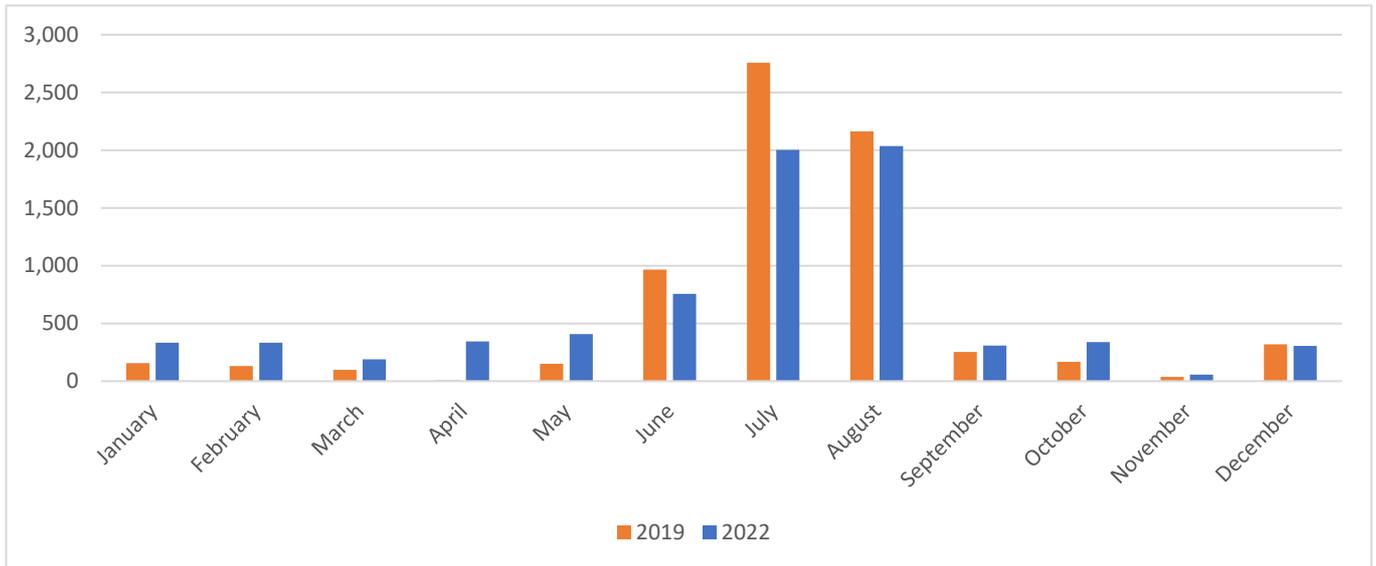


Figure 17: Comparison of the monthly overnights of years 2019 and 2022 (Own elaboration, based on data from ISTAT, 2023)

The monthly comparison between the pre-Covid year 2019 and the post-Covid year 2022, reveals that during 2022 the summer high season was not as strong as within 2019, but within the low season months (From January to May and from September to December), the overnights in 2022 were higher than those of 2019.

By considering the monthly distribution of the overnights in both 2019 and 2022 the seasonal patterns of Ala di Stura & Balme become apparent. Although being a mountain destination, which typically exhibits bi-seasonal tourism flows (summer and winter), the tourism flows of the PWA are mainly concentrated in the summer. The months of June, July and August generate 65% of the overall tourism flows in terms of overnights, leading to the PWA’s classification as a mono-seasonal destination.

### 5.1.3 Domestic & foreign guests

Ala di Stura & Balme feature a guest structure, which is strongly oriented towards the domestic source markets. Out of the total overnights of 2022 (7,409), 90% were generated by domestic guests (6,693 overnights). The average distribution between domestic and foreign guests in the last decade (from 2013 to 2022) is 92% domestic overnights, underlining the dependence of the PWA on the domestic source market.

**Alpine Space**

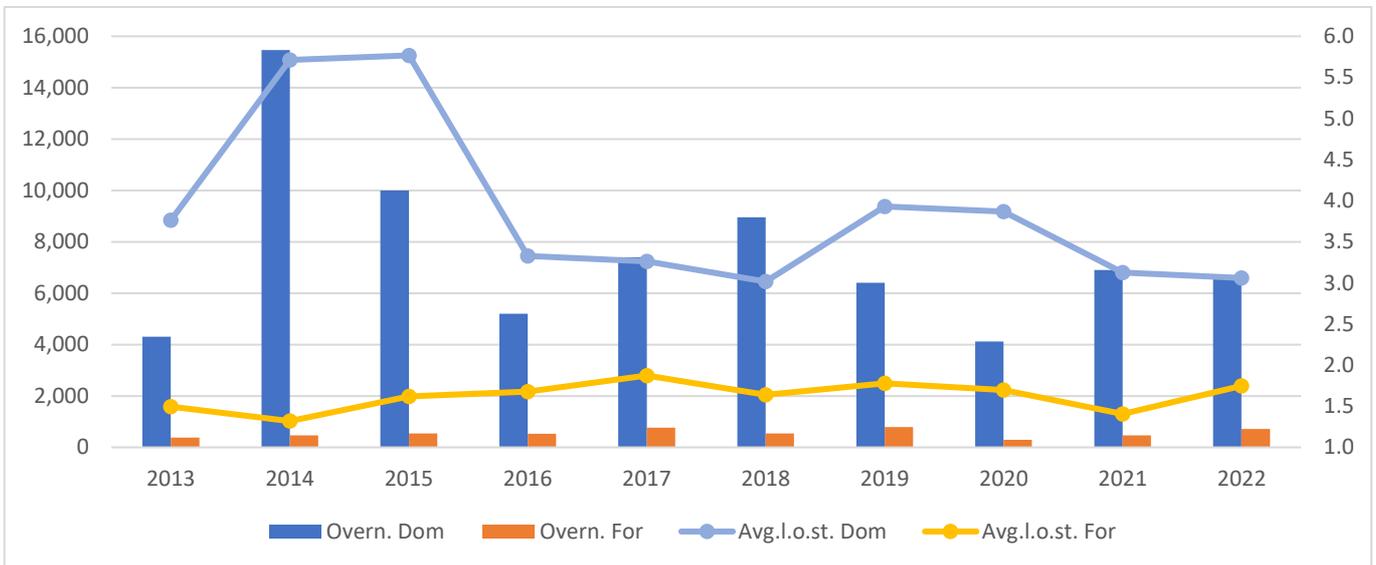


Figure 19: Overnight stays divided between domestic & foreign guests (Own elaboration, based on data from ISTAT, 2023)

In terms of average length of stay, throughout the last decade the domestic guests exhibited a higher average length of stay in comparison to the foreign guests.

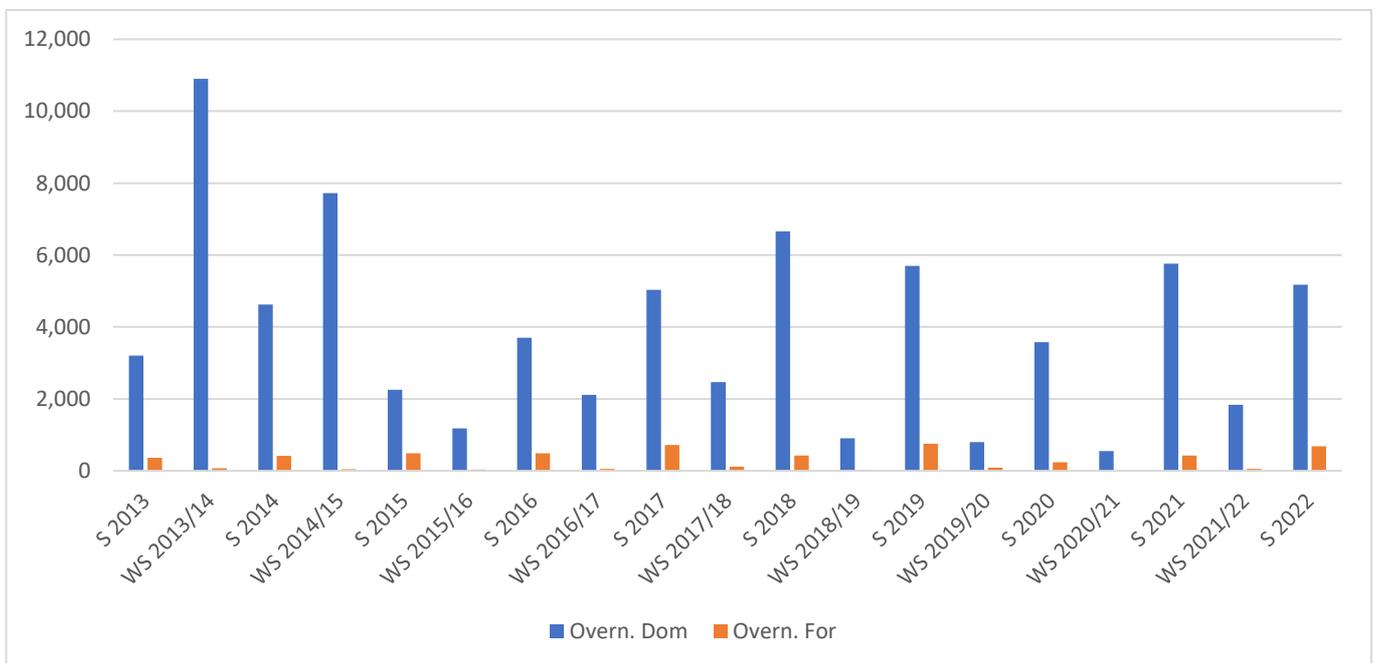


Figure 18: Overnight stays divided between winter & summer seasons and domestic & foreign guests from 2013 to 2022 (Own elaboration, based on data from ISTAT, 2023)

Following the general seasonality of Ala di Stura & Balme, both domestic and foreign guests tend to visit the destination more in the summer. The general low numbers of foreign overnights seem to be almost non-existent in the winter seasons.

## 5.2 T2 – Tourism accommodation

### 5.2.1 Accommodation structures & bed places

Ala di Stura & Balme features an accommodation sector, which has been marginally growing until the year 2022.

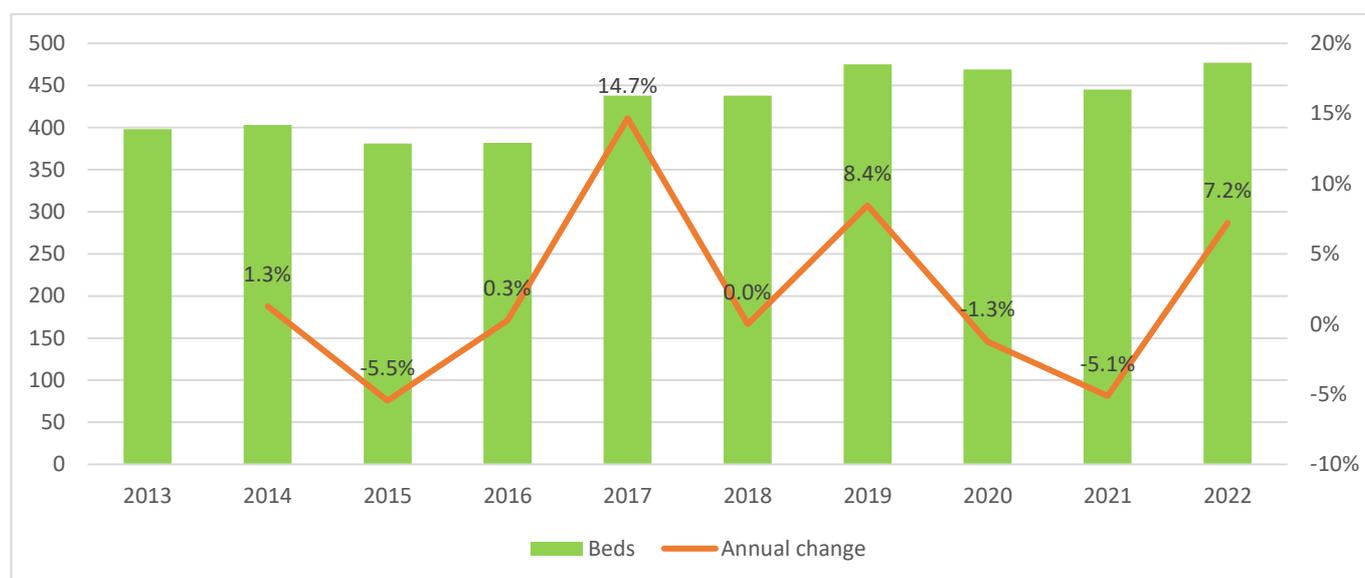


Figure 20: Number of beds from 2013 to 2022 (Own elaboration, based on data from ISTAT, 2023)

The number of bed places of Ala di Stura & Balme has seen an increase of almost 20% from 2013 (398 beds) to 2022 (477). Its sector includes the following accommodation types:

2022	Number of Structures	Number of Beds	Avg. Beds x structure	Share of beds x accom.
3 Star Hotels	2	82	41	17.2%
1-2 Star Hotels	1	24	24	5.0%
Residence/Pension/B&B	6	42	7	8.8%
Apartments	8	46	6	9.6%
Agritourism	2	26	13	5.5%
Mountain huts	5	116	23	24.3%
Holiday Homes	2	141	71	29.6%
<b>Total</b>	<b>26</b>	<b>477</b>		<b>100.0%</b>

Table 4: Number of structures and beds per accommodation type in 2022 (Own elaboration, based on data from ISTAT, 2023).

In terms of structures, the most prominent accommodation type in Ala di Stura & Balme are the apartments (8 structures), which encompass 46 beds (9.6% of total beds). In terms of bed places, the holiday homes are the most prominent accommodation type with 141 beds (29.6%), having also the highest average beds per structure (141 beds in 2 structures). Combining all the hotel categories (3 star and 1-2-star hotels), the share of their beds amounts to 22.2% of the overall bed number of Ala di Stura & Balme.

Looking at the evolution of the accommodation sector of Ala di Stura & Balme between 2013 and 2022, it

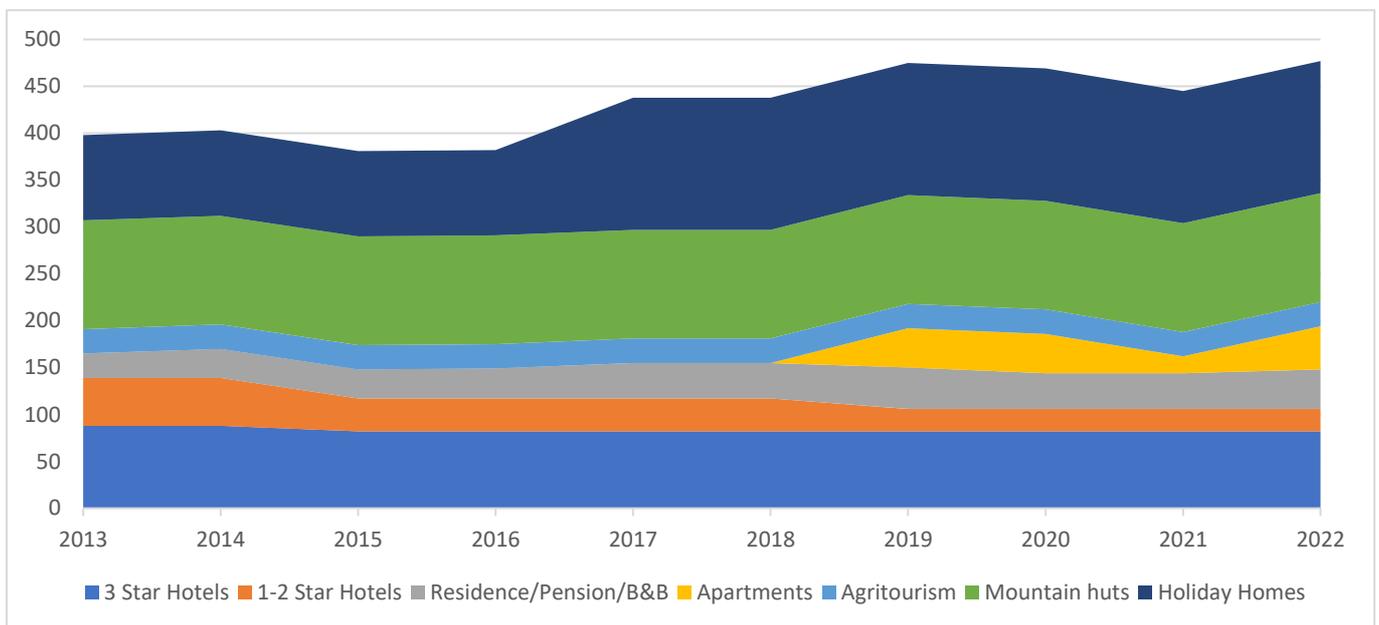


Figure 21: Evolution of beds per accommodation type from 2013 to 2022 (Own elaboration, based on data from ISTAT, 2023)

becomes apparent, that certain accommodation types did not change in the last decade in terms of number of beds, such as agritourism (26 beds) and mountain huts (116), while others decreased (1-2-star hotels from 51 to 24 beds, and 3 star hotels from 88 to 82 beds). The general increase from 398 in 2013 to 477 beds in 2022 was mainly driven by the accommodation types of Residence/Pension/B&B (from 26 to 42 beds), holiday homes (from 91 to 141 beds) and by the introduction of the category “Apartments” in 2019, which in 2022 encompassed 46 beds.

A marginal shift towards certain accommodation types can be identified. This shift can be best represented by the following figure.

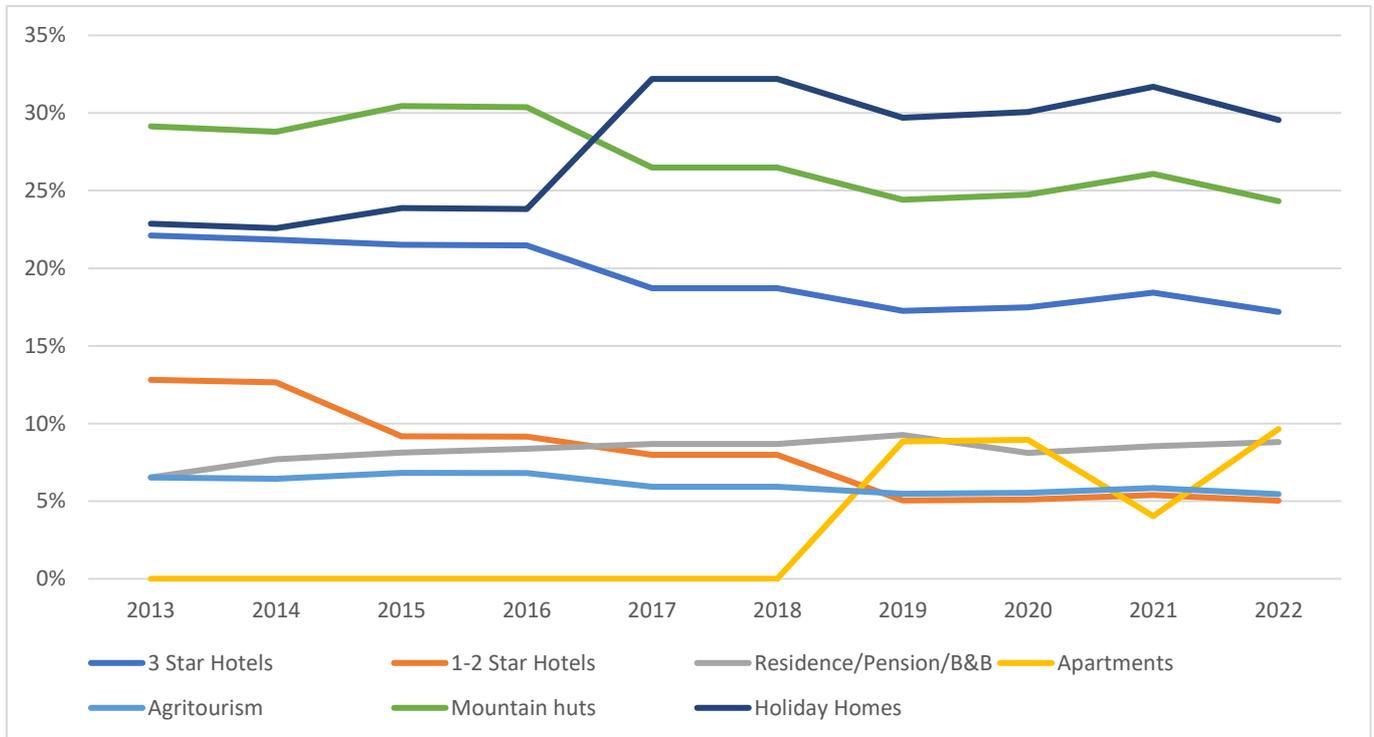


Figure 22: Evolution of the percentage of beds per accommodation type in relation to the overall beds in Ala di Stura & Balme from 2013 to 2022 (Own elaboration, based on data from ISTAT, 2023).

Starting in 2013 with a share of 23% of the overall beds, the holiday homes reached 30% in 2022, which represents the largest increase within this timeframe, besides the introduction of the category “Apartment”, which in 2022 represented 10% of the overall beds. As stated earlier, the largest decrease has been observed within the share of 1-2 Star hotels beds, which diminished from 13% in 2013 to 5% in 2022.

### 5.2.2 Gross bed availability & occupancy

Multiplying the available beds of Ala di Stura & Balme (477 beds for 2022) with the days of the year (365 days) yield the annual gross bed availability, which is 174,105 beds. This number is then used to calculate the gross bed occupancy, which is the relation between available and occupied beds (overnight stays), expressed as the percentage on a yearly or monthly basis. Unfortunately, this indicator does not consider the actual opening and closing days of the accommodation structures throughout the year, an information, which is not easily retrievable.

The gross bed occupancy of Ala di Stura & Balme exhibits a severe underutilization of the available bed places, which seems not to be confined to specific years, but has been so for the last decade, oscillating between 3% (2013) and 11% (2014), and settling on 4% in 2022.

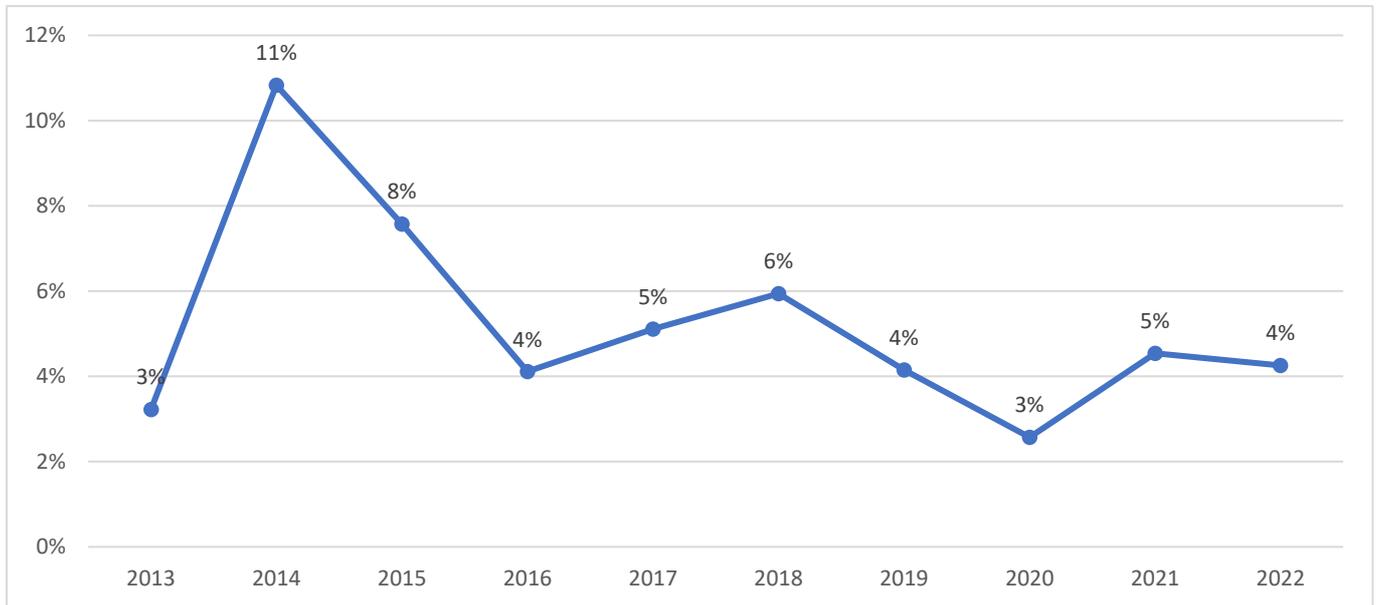


Figure 23: Evolution of the yearly gross bed occupancy in Ala di Stura & Balme from 2019 to 2022 (Own elaboration, based on data from ISTAT, 2023).

In order to further specify the infrastructural accommodation capabilities which are severely underutilized throughout the year, it is necessary to consider the gross bed occupancy on a monthly basis.

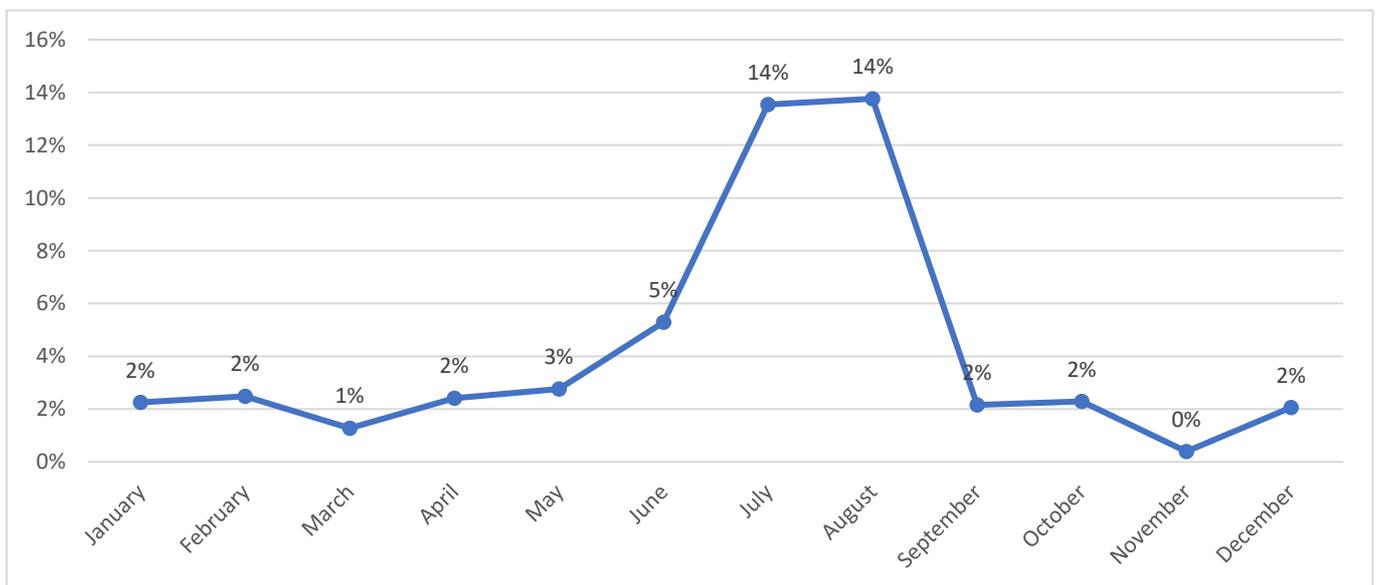


Figure 24: Gross Bed Occupancy 2022 (Own elaboration, based on data from ISTAT, 2023).

As specified before, it is necessary to treat the gross bed occupancy with care, but there are specific months of the year, during which the indicator can still be quite accurate in representing the utilization of the bed capacity. These months are usually located within the high seasons, which in mountain tourism destinations, due to their bi-seasonal tourism patterns, are summer and winter. During these months (July and August in

summer, January and February in winter) most of the accommodation establishments are open, therefore the gross bed availability is equal to the net bed availability.

As specified in chapter 5.1.1, Ala di Stura & Balme has to be treated as a mono-seasonal destination, within which 65% of the overnights are concentrated in the months of June, July and August. Although being the months with the highest tourism flows throughout the year, the gross bed occupancy during those months is still very low, encompassing 5% in June and 14% both in July and August. Assuming that the overnight and accommodation data is accurate, these numbers point towards a situation which is characterized by a severe underutilization of accommodation infrastructure not solely confined to the low season, but also to the high season.

### 5.3 Considerations for the future development

- Although being a mountain tourism destination with a high potential of natural and cultural attractiveness, Ala di Stura & Balme exhibits traits of mono-seasonal destinations, with tourism flows that resemble seasonality patterns usually found in sun & beach destinations (strong summer season, weak shoulder seasons, almost inexistent winter season). In fact, in 2022 65% of the overnights were registered in the months of June, July and August, making the destination highly dependent on the tourism flows of these 3 months and the weather conditions during them.
- One of the main socioeconomic and -cultural issue of the PWA is the extensive presence of 2<sup>nd</sup> homes, also in relation to its permanent inhabitants. While the latter encompass 581, the number of 2<sup>nd</sup> homes amounts to 1,700 units. This considerable imbalance can negatively influence the livability of the destination, since services of general interest and infrastructures are usually oriented towards the permanent population, which in the case of Ala di Stura & Balme is quite low and has been decreasing in the past decades.
- The accommodation sector of Ala di Stura & Balme is quite fragmented. Out of a total of 477 beds, almost 30% (141 beds) pertains to the accommodation category of holiday homes, although only 2 structures of this accommodation type are present in the PWA. This translates into an average beds per structure of 71 beds, which seems to be a quite high number for this accommodation type.
- The gross bed occupancy of Ala di Stura & Balme exhibits a severe underutilization of the available bed places, which is not confined to specific years, but has been so for the last decade, oscillating between 3% (2013) and 11% (2014), and settling on 4% in 2022. Future steps for tourism development should therefore aim not so much at investing in the development of new accommodation structures, but at an increase of the overall tourism flows, high and low season alike, in order to increase the overall gross bed occupancy

## 6 PP05 – Pradibosco (IT)

The Municipality of Prato Carnico is located at 686m with a surface of 81.72 km. Prato Carnico is part of “Val Pesarina”, named after the stream, that runs through it, which is called “Pesarina River”. This area is one of the eight valleys of Carnia, a region in the northeastern Italian area of Friuli. It borders with the “Cadore” area, in the Veneto region, and “Valle di Sappada”, with which shares 22 km of mountain chains. Within Prato Carnico, a small-dimension ski implant, called Pradibosco, is located. It is equipped with 1 ascent facility, for a total of 0.8 slope km that goes from 1,135m to 1,245m (altitude difference of 110m).

Its main activities and attractions encompass the following:



Figure 25: Overview of the Italian PWA Pradibosco and its attractions (Own elaboration, based on the data provided by PP05)

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer	Events
Skiing & snowboarding	Natural & cultural sites	Natural & cultural sites	Concerts
Ski touring	Guided tourist	Hiking/Trekking/Trail running	Cultural excursions
Cross-country skiing	Gastronomy	Mountain biking	Arlois & FASOIS event
Snowshoe hiking		Road cycling	“The night of the candles”, charity event (December)
Winter hiking		E-biking	“I brusin la Vecja”, traditional event (March)
Sledding		Climbing	“Scats Cjanalots” photography exhibition
		Gastronomy	

Table 5: Overview of the activities of Pradibosco, divided into snow-specific, non-snow specific and summer activities.

The overall population of Prato Carnico is 870 inhabitants. The last census data from the National Institute of Statistic (ISTAT, 2023) registered 830 inhabitants, although that data is not official yet. The whole sub-region of Alta Carnia is experiencing a depopulation phenomenon, fuelled most of all by the perception that the attractiveness of living in mountain regions is decreasing and that urban areas offer more services. Moreover, the current average age of the population is approx. 51.5 years, while the natality index is approx. 2% and the emigration index is approx. 12.7%. The national statistics institute (ISTAT, 2023) has gathered information about the development trends of the regional population, allowing also a focus on the Prato Carnico municipality. As indicated in the figure below, Prato Carnico’s population has seen a decrease throughout the last decade. The population’s variation exhibits a slow but constant negative trend, which is also aligned to the trend of the Friuli region as well as the community of Carnia.

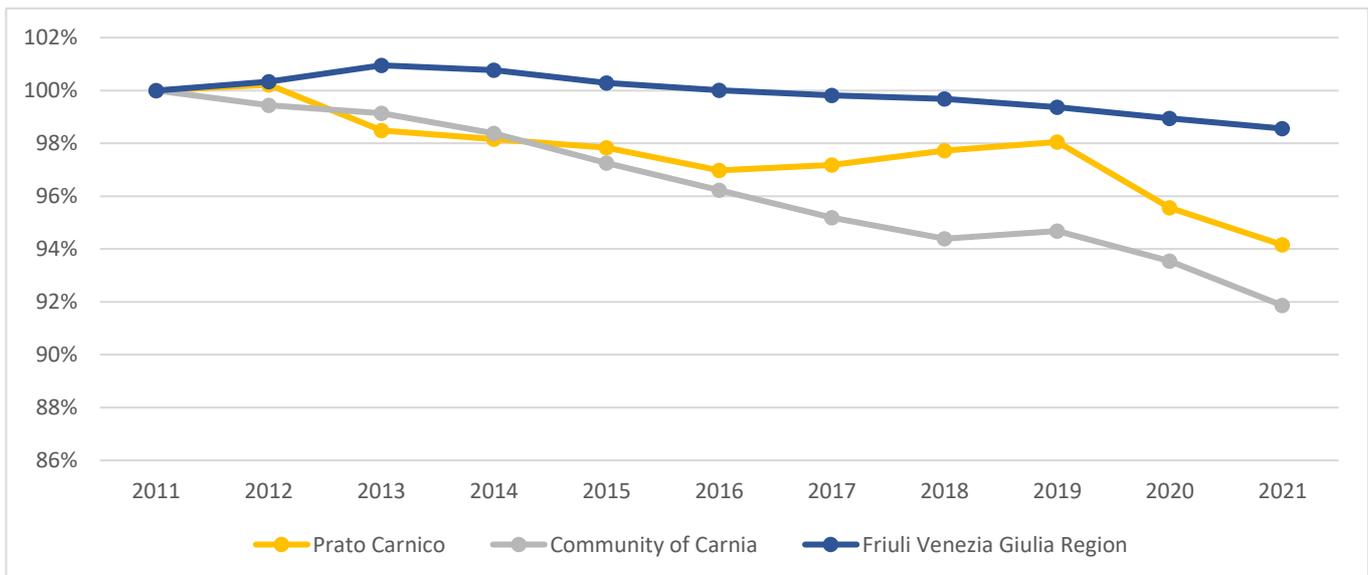


Figure 26: Annual population variation from 2011 (100%) to 2021 (Own elaboration based on data provided by Mountain Community of Carnia).

## Alpine Space

In the following figure the demographic development of Carnia and Prato Carnico is represented for the period from 1961 to 2021. Both development lines show a constant reduction of the inhabitants, confirming the decreasing population trend.

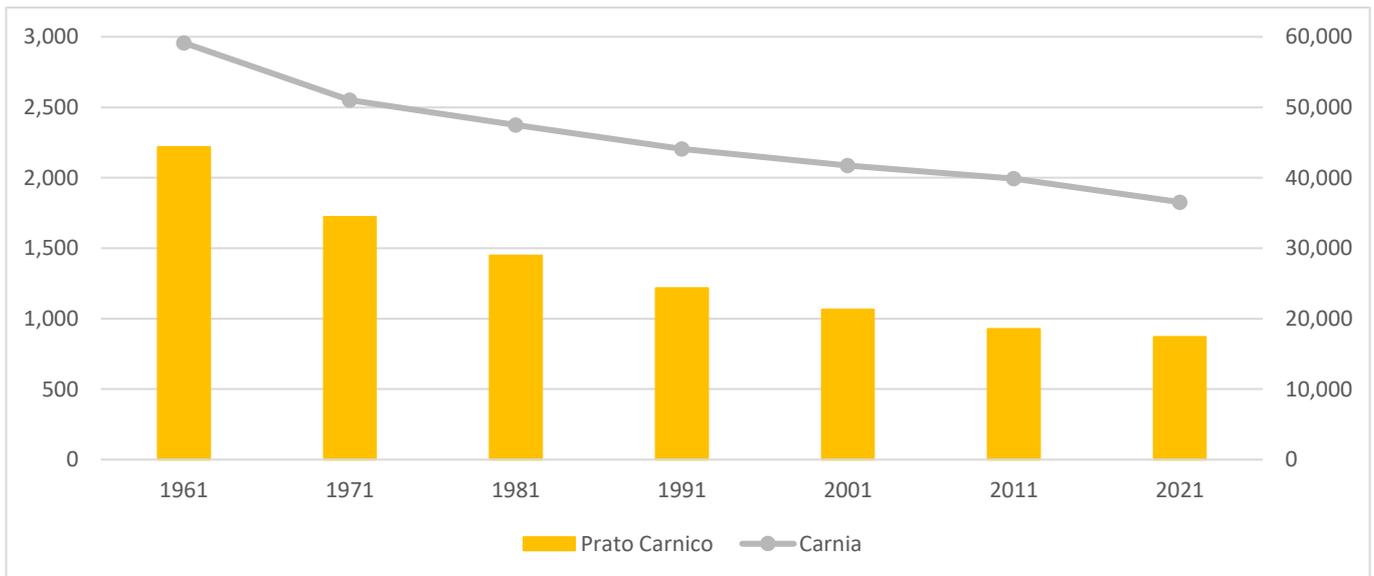


Figure 27: Decennial development of the population of Prato Carnico (primary axis to the left of the figure) and Carnia (secondary axis to the right of the figure) (Own elaboration based on data provided by Mountain Community of Carnia).

Regarding the population density the following figure shows how also this indicator follows the demographic dynamics. As a matter of fact, the inhabitants per km<sup>2</sup> have more than halved from 1961 to 2021, in line with the depopulation phenomenon described before.

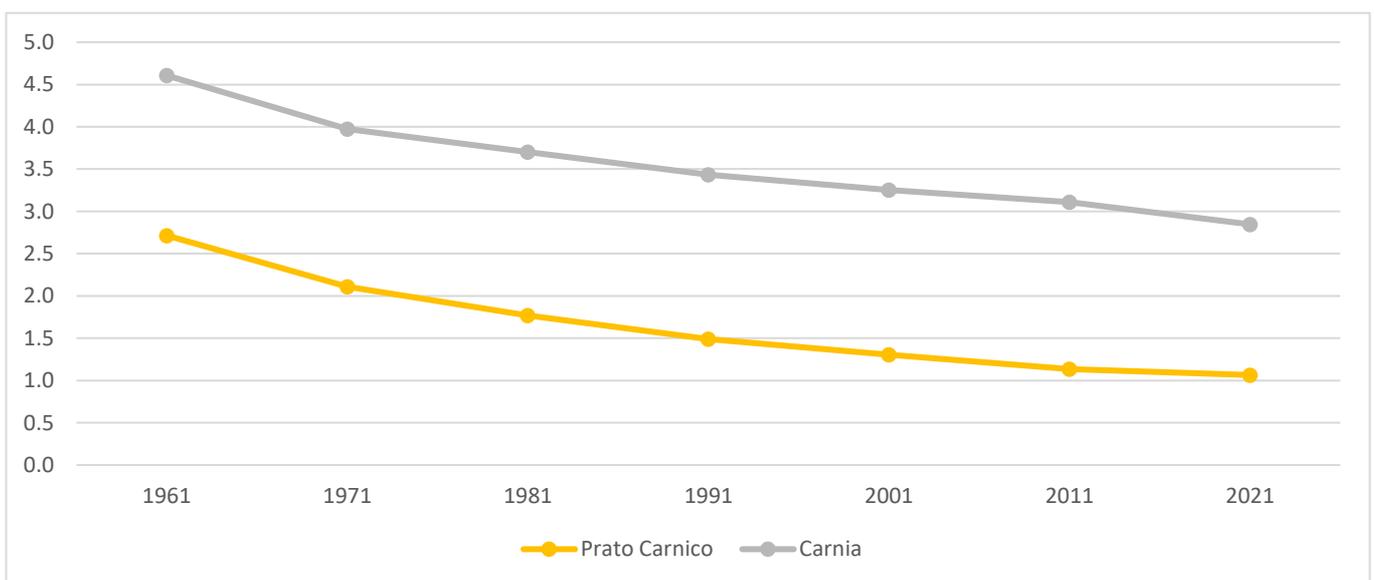


Figure 28: Decennial development of the population density (inhabitant per km<sup>2</sup>) of Prato Carnico and Carnia (Own elaboration based on data provided by Mountain Community of Carnia)

## 6.1 T1 – Tourism demand

Prato Carnico is a small village located in the Carnic Alps. The whole region is famous for its natural and cultural attractions. Pradibosco is a small ski facility. It is one of the six ski areas managed by PromoTurismoFVG, the regional tourist promotion agency. Thanks to its proximity to the more frequented Ravascletto-Zoncolan tourist area, Pradibosco benefits from additional tourist flows, in particular of guests who want to refresh and/or increase their skiing ability as well as attend school camps or learning activities. In terms of target groups, Pradibosco is mainly oriented towards families with children, groups, and school classes. However, its tourist offer is threatened by climate change, most of all due to its negative effects regarding the increase of the unreliability of snow.

### 6.1.1 Yearly arrivals & overnight stays

The annual tourism flows of Carnia of 2021, as shown in the table below, represents more than 5% of the total tourism flows in Friuli-Venezia Giulia. The main part of overnight stays is concentrated in the winter months although specific monthly data are not available. The average length of stay reveals that guests tend to spend on average slightly more time in Carnia (3.9 days) than in Friuli-Venezia Giulia (3.8 days).

Area	Total			Of which foreign tourists		
	Arrivals	Overnights	Average length of stay	Arrivals	Overnights	Average length of stay
Pordenone, Piancavallo & Dolomiti Friulane	133,398	444,083	3.3	30,054	124,199	4.1
Udine & Lignano Sabbiadoro	851,043	3,667,738	4.3	438,486	1,878,740	4.3
Tarvisiano & Sella Nevea	101,302	224,708	2.2	43,161	72,135	1.7
<b>Carnia</b>	<b>106,600</b>	<b>420,208</b>	<b>3.9</b>	<b>14,752</b>	<b>44,682</b>	<b>3.0</b>
Gorizia & Grado-Aquileia	391,752	1,617,287	4.1	232,063	991,388	4.3
Trieste	338,133	929,996	2.8	157,027	415,240	2.6
<b>Friuli-Venezia Giulia Total</b>	<b>1,922,228</b>	<b>7,304,020</b>	<b>3.8</b>	<b>915,543</b>	<b>3,526,384</b>	<b>3.9</b>

Table 6: Arrivals, overnights & average length of stay in tourist accommodation structures for the year 2021 (Own elaboration based on data provided by Promoturismo FVG)

Due to its statistical inclusion in the larger area of Carnia, data related to yearly arrivals & overnight stays are not available specifically for the municipality of Prato Carnico, although the Carnia mountain Community is currently carrying out assessments to identify the number of arrivals and overnights in the upper Carnia area, including the municipality of Prato Carnico, through the analysis of the mobile phone data.

### 6.1.2 Domestic & foreign guests

Prato Carnico relies mainly on the domestic tourism market: In 2022 out of the total of 4,493 overnights, about 78% of Prato Carnico’s guests were Italians, while 22% were foreigners. However, it is to be noted that foreign arrivals have slightly increased between 2022 and 2019 (not considering 2020 and 2021 due to the Covid-pandemic). The same dynamics can be seen regarding the overnight stays (at least overnights registered in the local accommodation structures). In general, the tourism flows between 2019 and 2022 saw a marginal diminishment, although this decrease affected solely the domestic market. Between 2019 and 2022 the domestic overnights decreased by 40% (from 5,847 in 2019 to 3,513 in 2022), while the foreign overnights increased by 11% (from 881 in 2019 to 980 in 2022).

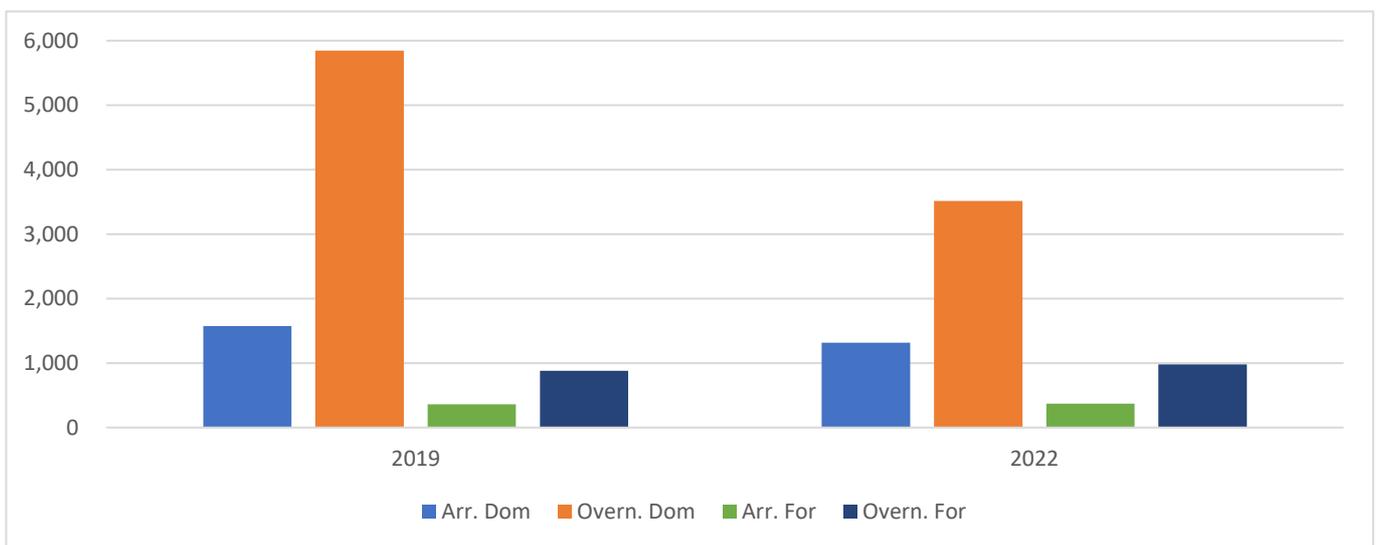


Figure 29: Arrivals & overnights of Prato Carnico for the years 2019 and 2022, divided by domestic (Dom.) and foreign (For.) tourists (Own elaboration based on data provided by Promoturismo FVG)

## 6.2 T2 – Tourism accommodation

The overall number of accommodation facilities is 19 with a total of 414 available beds. Between 2019 and 2022 the number of accommodation establishments and bed places has remained constant. Accommodation structures in the PWA area are mostly family-owned and for many of them offering

accommodation is not the main business (farmers, local producers as well as the local bakery, which rents apartments). This can be an advantage due to a deeper connection between tourists and locals.

2022	Number of Structures	Number of Beds	Avg. Beds x structure	Gross bed availability	Share of beds x accom.
2 Star Hotels	2	116	58	42,340	28.0%
Residence/Pension/B&B	1	3	3	1,095	0.7%
Apartments	11	181	16	66,065	43.7%
Agritourism	4	50	13	18,250	12.1%
Mountain huts	1	64	64	23,360	15.5%
<b>Total</b>	<b>19</b>	<b>414</b>	<b>22</b>	<b>151,110</b>	<b>100.0%</b>

Table 7: Number of structures and beds per accommodation type in 2022 (Own elaboration, based on data from ISTAT, 2023)

In terms of structures, the most prominent accommodation type in Pradibosco are the apartments (11 structures), which also have the highest number of bed places (181 beds, 43.7% of total beds).

### 6.3 Considerations for the future development

Prato Carnico, as one of the 28 municipalities comprising the Community of Carnia, is part of a regional development project called “Carnia 2030”, which aims to raise the attractiveness of the whole mountain region, share best practices and services throughout the 28 municipalities. In this setting, administrations are asked to develop year-round tourism offers during and spread it among all the region thanks to the coordination of all the services offered in this territory. Furthermore, the project aims at increasing the quality and quantity of infrastructures and services, in order to raise the quality of life of the inhabitants of the small villages, which will have also a positive influence on the sense of belonging to the community and territory as well as indirectly increasing the tourism attractiveness of the area. The overall aim is to help people appreciate (remote) mountain areas as comfortable, healthy as well as enjoyable living spaces. Also, the enhancement of participation in decision-making processes and in the implementation of policies, can be a motivator for local people to appreciate this mountain reality and to decide to live here.

Another important objective for the area’s future development is the valorisation of its tangible and intangible cultural heritage. Prato Carnico and its whole valley (Val Pesarina) is one of the richest municipalities of the Friuli-Venezia Giulia region in terms of cultural heritage, for example due to its ancient traditions of horology mastery and multitude of cultural monuments. The local knowledge and culture are what characterizes the identity and the uniqueness of this municipality. The challenging task will be to find the balance between its protection on one side and its tourism development and commercialization on the other.

## 7 PP06 – Werfenweng (AT)

The altitude of the PWA extends from 902m to 1,834m, its height difference being therefore 932m. It offers 10 ascent facilities, 17 slopes and 29 slope km. It features 2 cable cars, one of which connects the town centre with the skiing area and offers soft mobility and high-quality services for last-mile mobility. Furthermore, Werfenweng is a member of Alpine Pearls<sup>3</sup>.

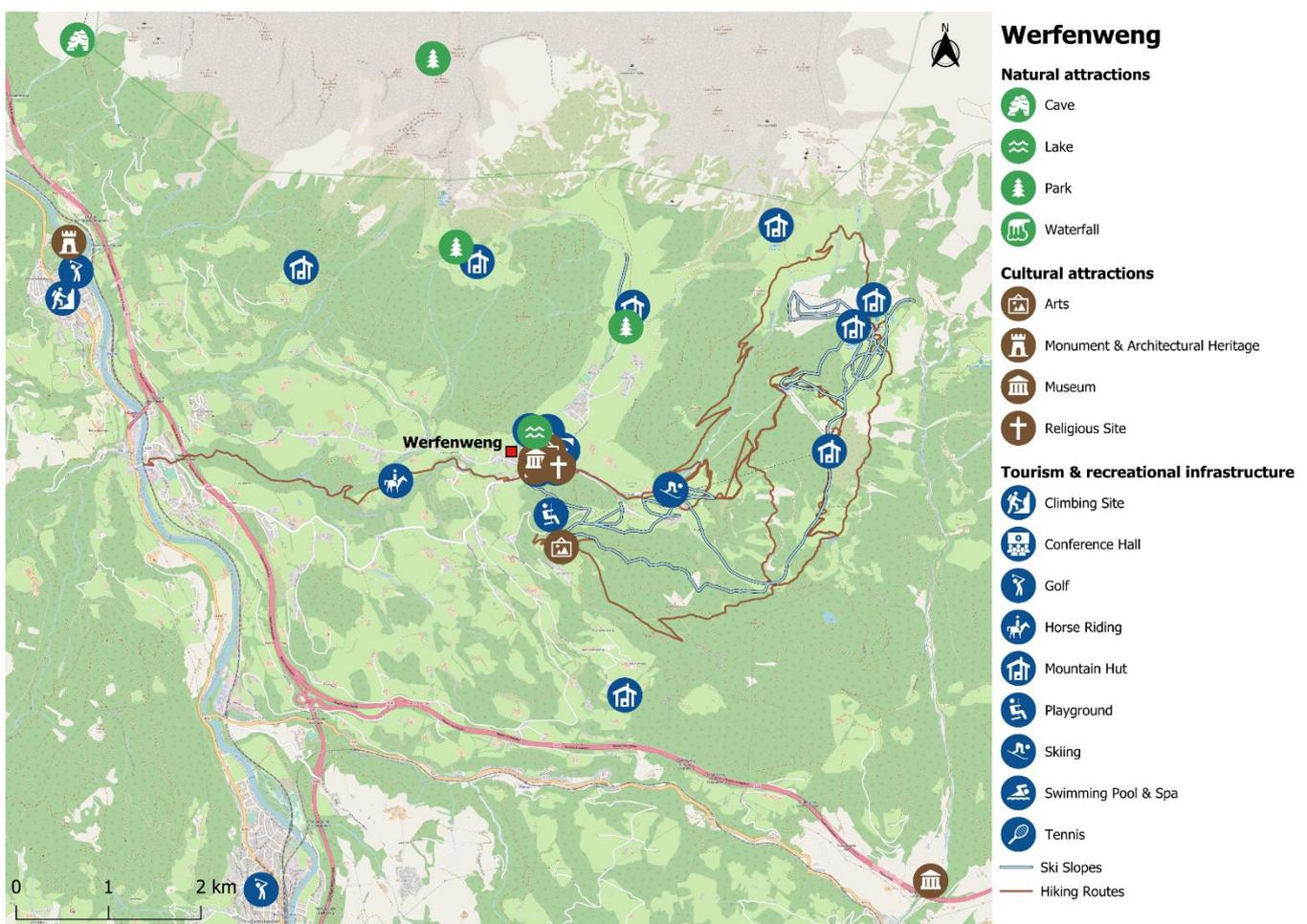


Figure 30: Overview of the Austrian PWA Werfenweng (Own elaboration, based on the data provided by the partner)

Its main activities and attractions encompass the following:

<sup>3</sup> <https://www.alpine-pearls.com/en>

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer
Skiing & Snowboarding Ski touring	Natural & Cultural sites	Natural & Cultural sites
Cross-country skiing	Guided tours	Hiking / trekking / trail running
Snowshoe hiking	Gastronomy	Climbing
Winter hiking	Horseback riding	Mountain biking, e-biking, road cycling
Sledding	Wellness areas & Indoor swimming pools in hotels	Outdoor & Indoor Swimming
Horse slide		Minigolf
paragliding		Paragliding
		Adventure Park

Table 8: Overview of the activities of Werfenweng, divided into snow-specific, non-snow specific and summer activities.

The PWA Werfenweng has an overall population of 1,099 inhabitants. The area of the municipality extends over 45.01 km<sup>2</sup> (Statistics AT, 2023)

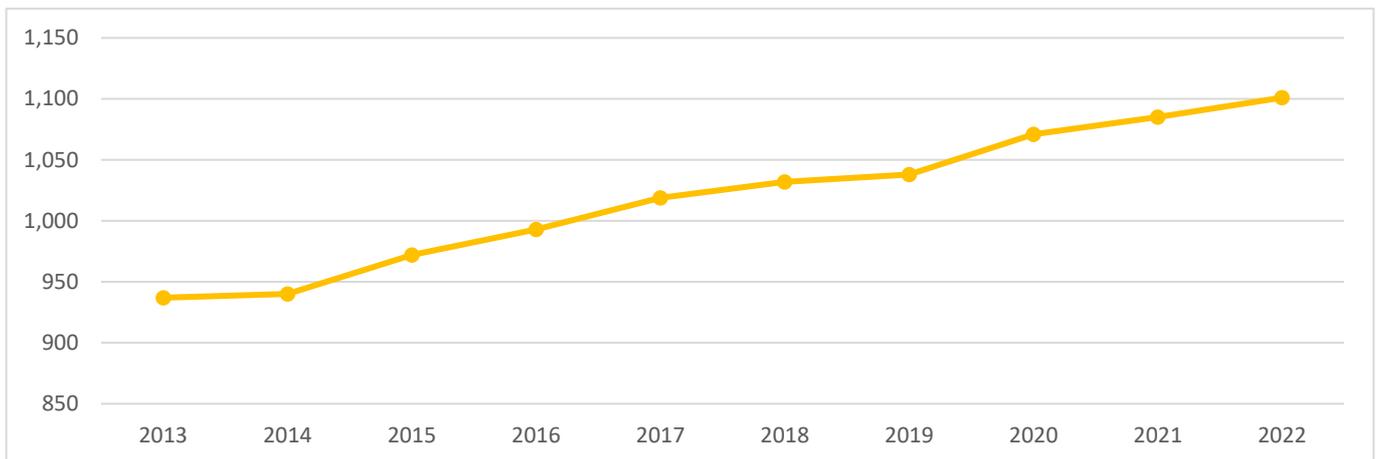
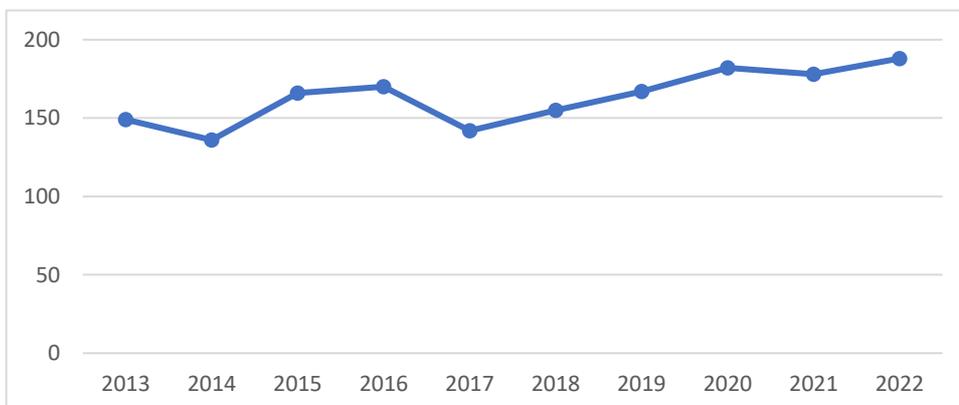


Figure 31: Development of the population of Werfenweng from 2013 to 2022 (Own elaboration, based on data from Statistics AT, 2023).

Throughout the last 10 years, the population of Werfenweng has been gradually increasing.



In 2022 there were 188 2<sup>nd</sup> homes in Werfenweng. In relation to the 1,099 inhabitants, the presence of 2<sup>nd</sup> homes should not be neglected.

Figure 32: Evolution of the number of 2nd homes from 2013 to 2022 (Own elaboration, based on data from Statistics AT, 2023).

## 7.1 TI – Tourism demand

### 7.1.1 Yearly arrivals & overnight stays

A comparison between the pre-Covid-year 2019 and the post-Covid-year 2022 reveals a decrease of -18.3% of the arrivals (from 73,768 in 2019 to 60,276 in 2022) as well as of -20.1% of the overnight stays (from 307,152 in 2019 to 245,488 in 2022). Furthermore, the annual average length of stay saw a decrease from 4.16 in 2019 to 4.07 in 2022. Hereinafter the representation of arrivals and overnights from the year 2019 to 2022.

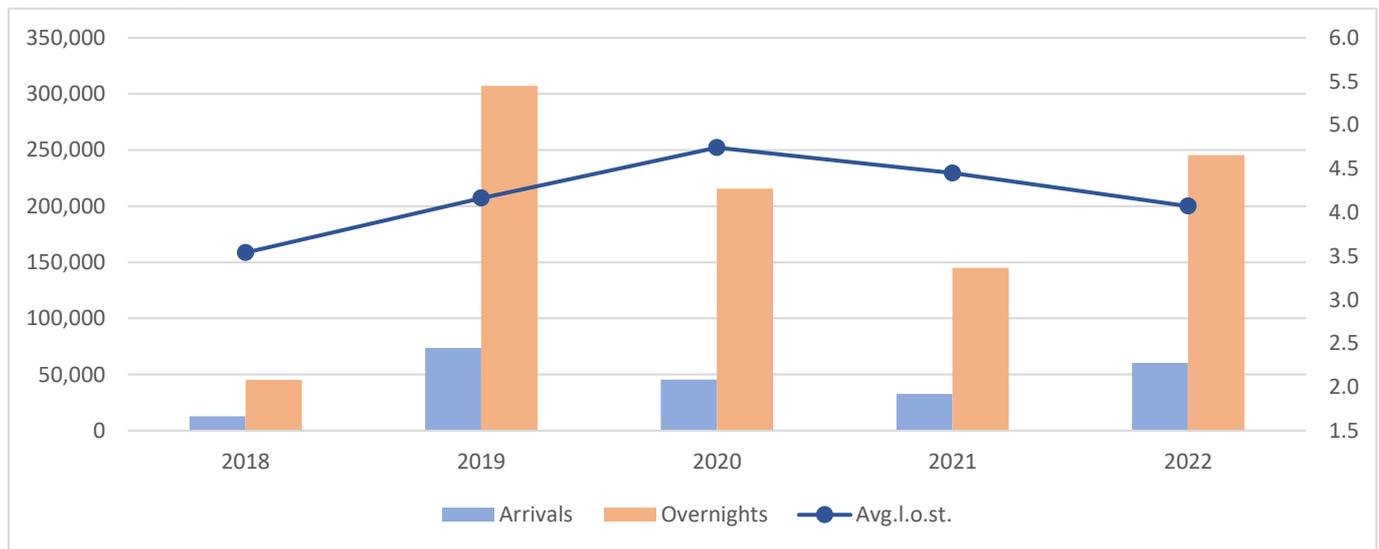


Figure 33: Year arrivals, overnight stays, and average length of stay from 2019 to 2022 (Own elaboration, based on data from Statistics AT, 2023).

Due to the effects of the Covid-pandemic, especially considering international travel restrictions, the data of 2020 and 2021 must be treated with care. The year 2018 is also not considered, due to the unavailability of data (only the months of October, November and December were available).

### 7.1.2 Arrivals & overnight stays: Winter & summer season

In terms of arrivals & overnights, a differentiation between winter and summer seasons allows to comprehend better the seasonality of Werfenweng. The winter season 2018/19 (November 2018 – April 2019), as the last pre-Covid winter season, saw a share of 49.3% of the tourism year (November 2018 – October 2019), amounting to 150,214 overnights, and an average length of stay of 4.15 days. The latter was also equal to the summer season (May 2019 – October 2019), which encompassed 154,643 overnight stays.

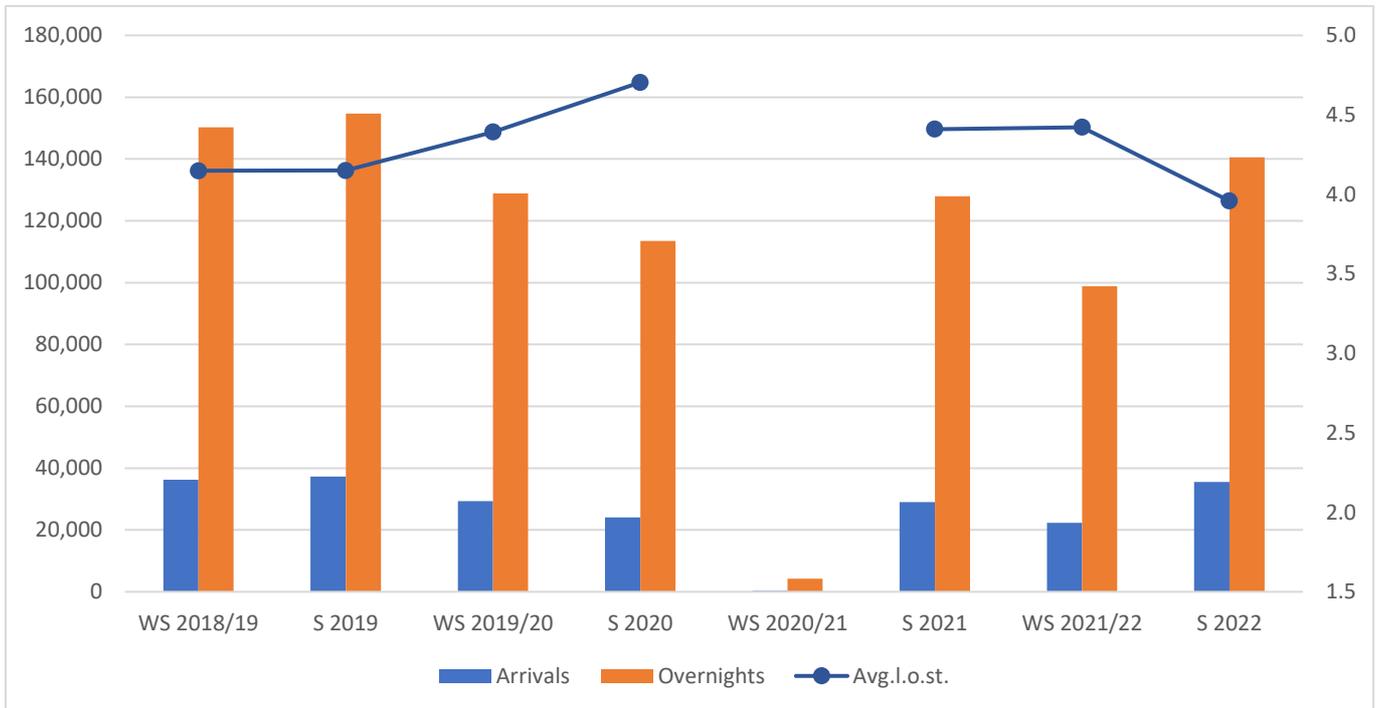


Figure 34: Arrivals, overnight stays and average length of stay divided between winter & summer seasons from 2018 to 2022 (Own elaboration, based on data from Statistics AT, 2023)

In terms of overnights, Werfenweng seems to have a slightly stronger summer season, although some minor residual Covid-effects have to be considered when looking at the last available winter season of 2021/22. The latter saw a share of 41.3% of the overall overnight stays (98,845 overnights), with an average length of stay of 4.42 days. With 140,506 overnights, during the summer season 58.7% of the overnights were generated, with lower average length of stay of 3.96 days.

Hereinafter a comparison of the monthly overnights between the years 2019 and 2022:

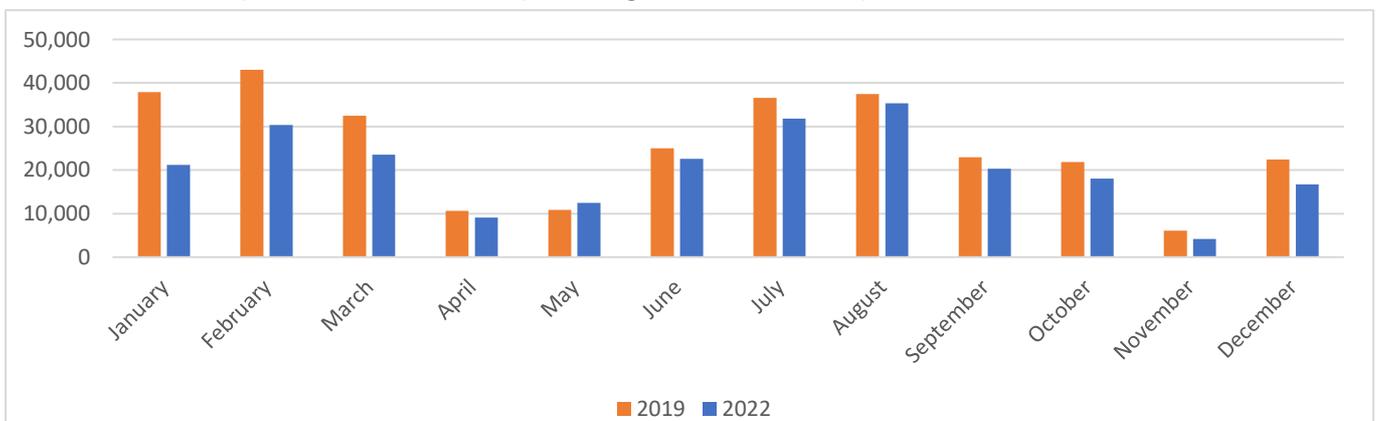


Figure 35: Comparison of the monthly overnights of years 2019 and 2022 (Own elaboration, based on data from Statistics AT, 2023)

The monthly comparison between the pre-Covid year 2019 and the post-Covid year 2022 reveals that the overnights of almost every month of 2022 were fewer than the during the months of 2019 (except for the month of May). The largest difference between 2019 and 2022 can be seen in the months of January and February, although those months in 2022 were also influenced by some Covid-aftereffects.

### 7.1.3 Domestic & foreign guests

Werfenweng features a guest structure, which is strongly oriented towards foreign source markets. Out of the total overnights of 2022 (245,488), 81.7% were generated by foreign guests (200,595 overnights).

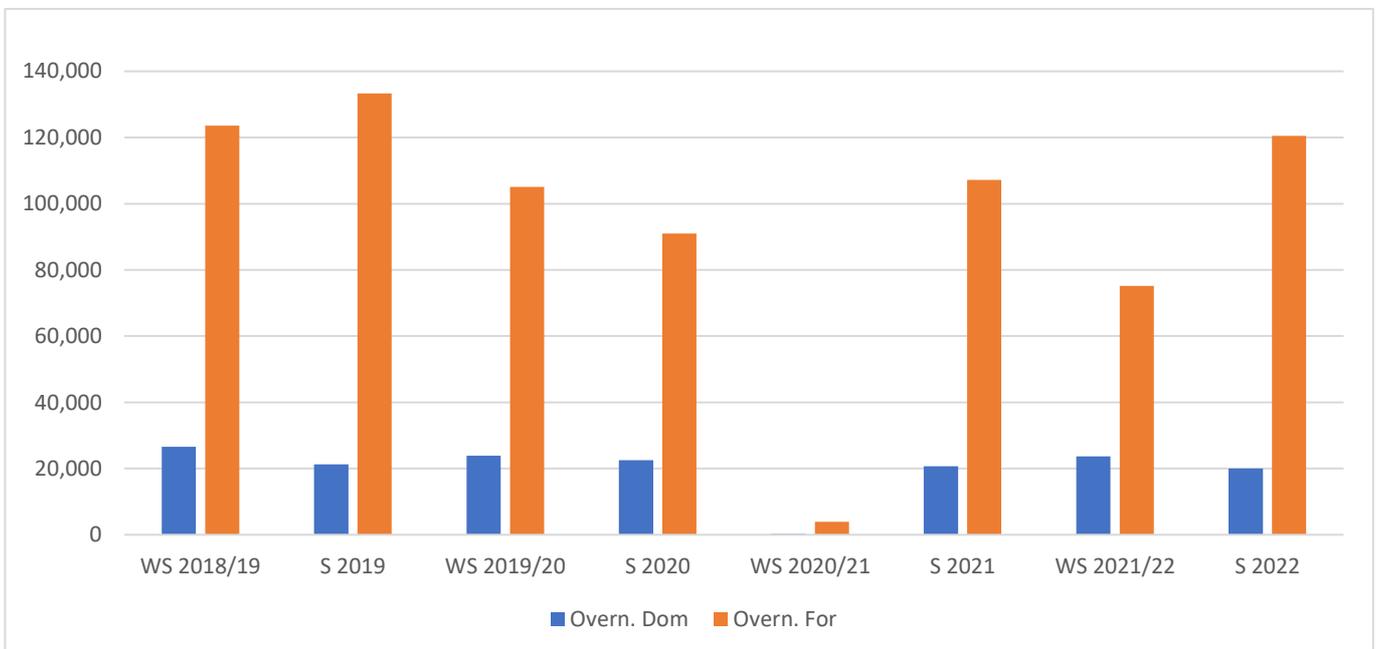


Figure 36: Overnight stays divided between winter & summer seasons and domestic & foreign guests from 2018 to 2022 (Own elaboration, based on data from Statistics AT, 2023)

With 84.4% the year 2019 saw an even higher share of foreign overnights, which amounted to 259,234 overnights (which in absolute numbers were even higher than the total overnights of 2022).

Influenced partially by the oftentimes longer travel distances, foreign guests tend to have a higher average length of stay, which in 2022 in Werfenweng resulted in 4.49 days for foreign and 2.89 for domestic guests.

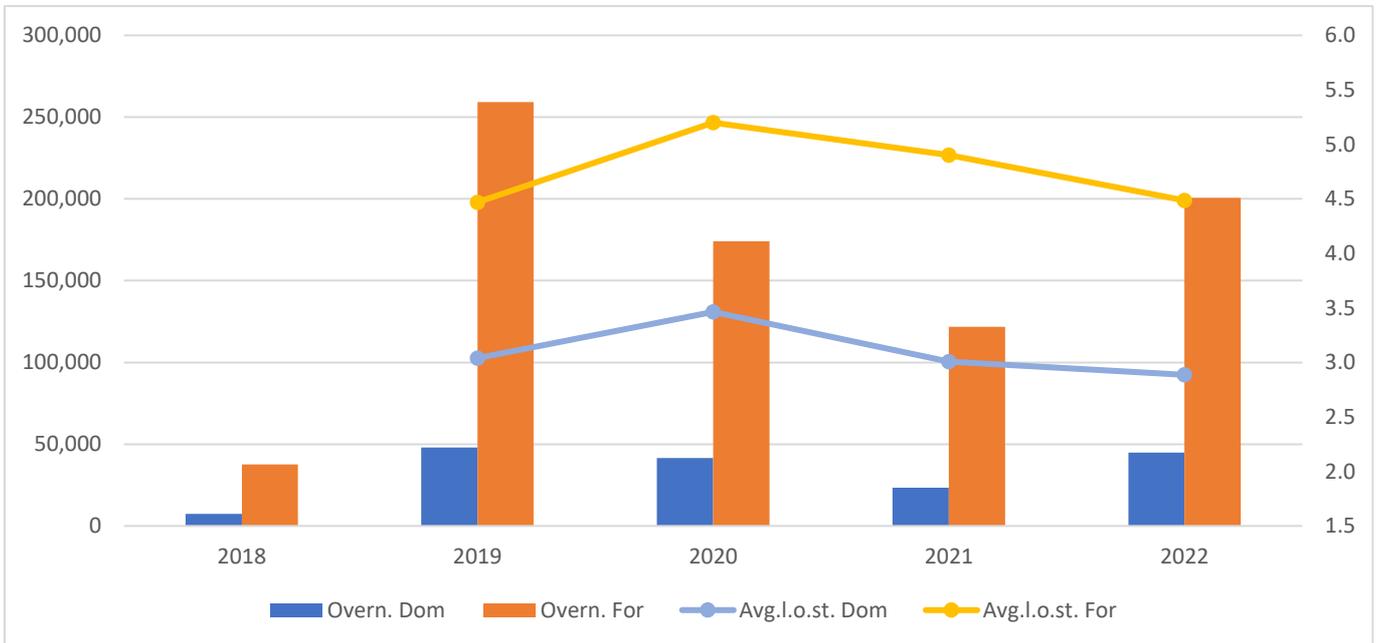


Figure 37: Overnight stays divided between domestic & foreign guests (Own elaboration, based on data from Statistics AT, 2023)

The overnights of domestic guests seem to be relatively stable between winter and summer seasons, oscillating between 20,744 in the summer season 2021 and 26,626 overnights in the winter season 2018/19. These reduced domestic overnight numbers underlining Werfenweng’s high dependency on foreign guests.

The foreign overnights exhibit a higher variation, which fluctuated between 75,193 in the winter season 2021/22 and 133,346 overnights in the summer season 2019. In comparison to the domestic guests, the average length of stay of foreign guests in 2022 was higher both in winter (4.87 against 3.42 days) and summer (4.37 against 2.52 days). Furthermore, foreign guest overnights were slightly higher in summer than in winter (38.4% in winter 2021/22, 64.1% in summer 2022).

### 7.1.4 Foreign source markets

Regarding the future development of Werfenweng, the analysis of the main foreign source markets can reveal insights of the already established foreign customer base and the relevance of the destination in different international contexts. As pointed out earlier, in Werfenweng the foreign overnights represented 84.4% in 2019 and 81.7% in 2022 of the overall overnight stays.

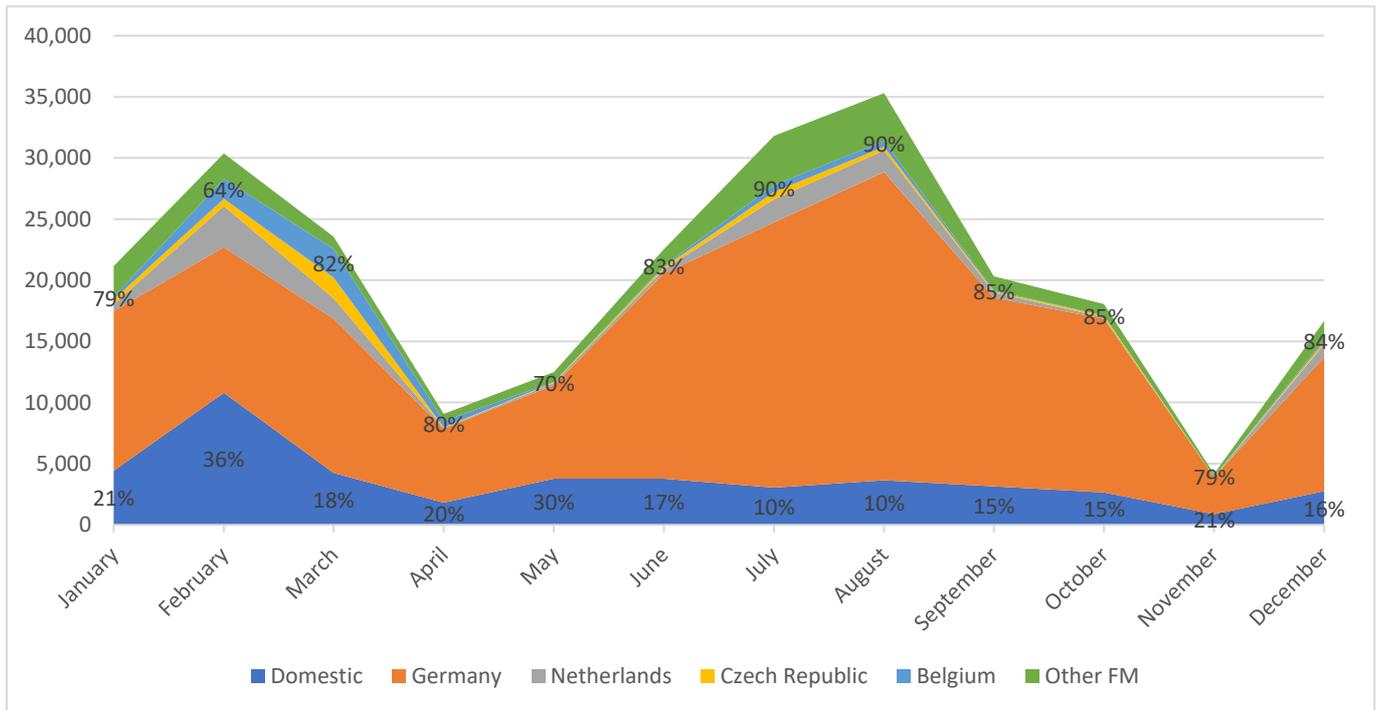


Figure 38: Distribution of domestic & foreign overnights between the different source markets in the year 2022. The data callout represents the share in % between domestic & all foreign overnights (Own elaboration, based on data from Statistics AT, 2023).

The distribution of the 5 major foreign source markets indicates, that the main foreign tourism flows are of German origin. In fact, in 2022 the German overnights exceeded even the domestic overnights in every month of the year. In 2022 the overnights of German guest amounted to 65% of the overall overnights (158,619 of 245,488 overnights), of which 100,994 overnights (64% of the German overnights) were generated during the summer season (May-October 2022). Besides the domestic market (18% of overnights), the next highest number of overnights is generated by Dutch, Czech and Belgian guests, (representing respectively 5%, 2% and 2% of the overall overnights). The remaining foreign overnights are pooled into the category “Other Foreign Markets”, which represent 8% of the total overnights (20,092 overnights).

## 7.2 T2 – Tourism accommodation

### 7.2.1 Accommodation structures & bed places

Werfenweng features an accommodation sector, which in 2022 comprised a total of 113 structures and 2,010 bed places. Hereinafter the evolution of the number of beds from 2018 to 2022.

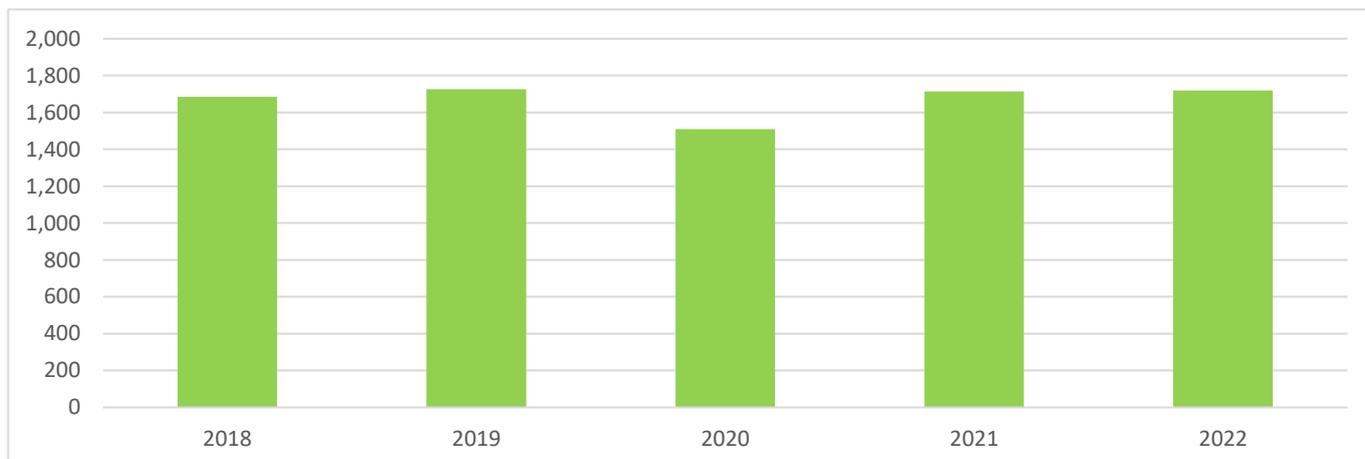


Figure 39: Number of beds from 2018 to 2022 (Own elaboration, based on data from Statistics AT, 2023)

The number of bed places of Werfenweng has seen an increase of 2.1% from 2018 to 2022. The accommodation sector includes the following accommodation types:

2022	Number of Structures	Number of Beds	Avg. Beds x structure	Share of beds x accom.
4 Star Hotels	3	642	214	31.9%
3 Star Hotels	6	162	27	8.1%
1-2 Star Hotels	5	118	24	5.9%
Residence/Pension/B&B	14	135	10	6.7%
Apartments	53	449	8	22.3%
Agritourism	22	213	10	10.6%
Mountain huts	3	15	5	0.7%
Other	7	276	39	13.7%
<b>Total</b>	<b>113</b>	<b>2,010</b>	<b>18</b>	<b>100.0%</b>

Table 9: Number of structures and beds per accommodation type in 2022 (Own elaboration, based on data from Statistics AT, 2023).

In terms of structures, the most prominent accommodation type in Werfenweng are the apartments (53 structures), which also have the 2<sup>nd</sup> highest number of bed places (449 beds, 22.3% of total beds). In terms of bed places, the 4 Star hotels are the most prominent accommodation type with 642 beds (31.9% of total beds), and traditionally have also the highest average beds per structure, since hotels of the higher categories typically feature a larger infrastructure and ancillary amenities. The latter can also have a positive influence, extending the average length of stay of guests, due to the provision of additional, oftentimes weather-independent activities, such as wellness. Combining all the hotel categories, their share amounts to 45.9% of Werfenweng's beds.

Alpine Space

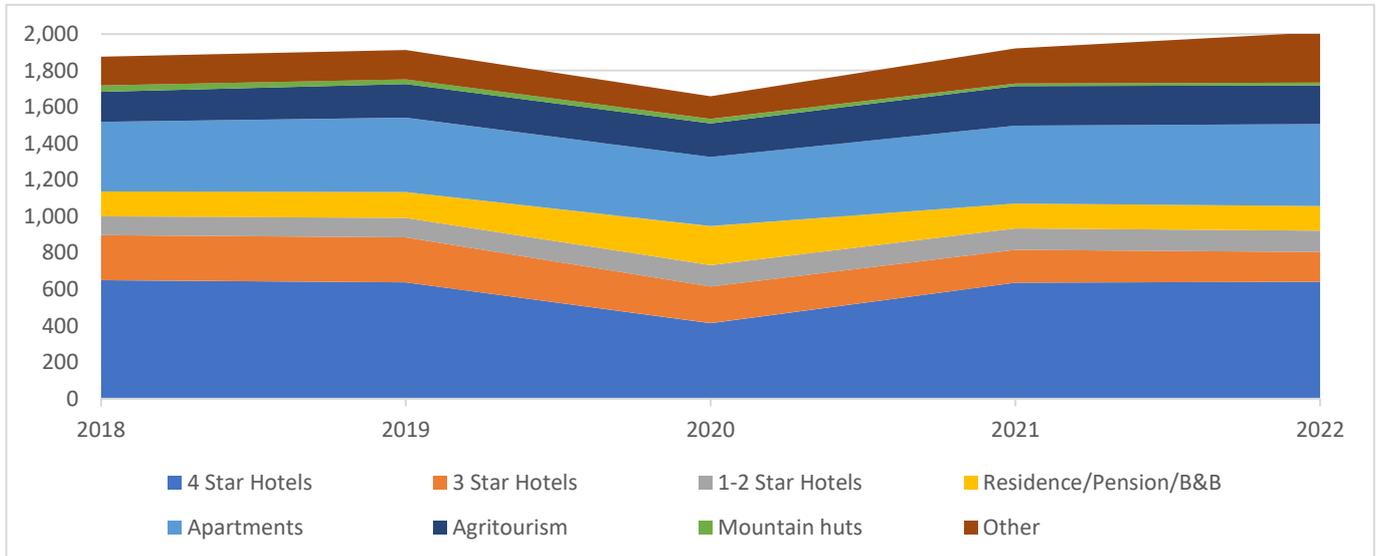


Figure 41: Evolution of beds per accommodation type from 2018 to 2022 (Own elaboration, based on data from Statistics AT, 2023)

Looking at the evolution of the accommodation sector of Werfenweng between 2018 and 2022, a marginal shift towards certain accommodation types can be identified. This shift becomes even more apparent, if the development of the share of beds per accommodation type is represented. Starting in 2018 with a share of 23% of the overall beds, the apartments reached 26% in 2022, which represents the largest increase within this timeframe. While 4 Star hotels saw a minor decrease from 39% in 2018 to 37% in 2022, the largest decrease has been observed within the 3 Star hotels, which diminished from 15% in 2018 to 9% in 2022.

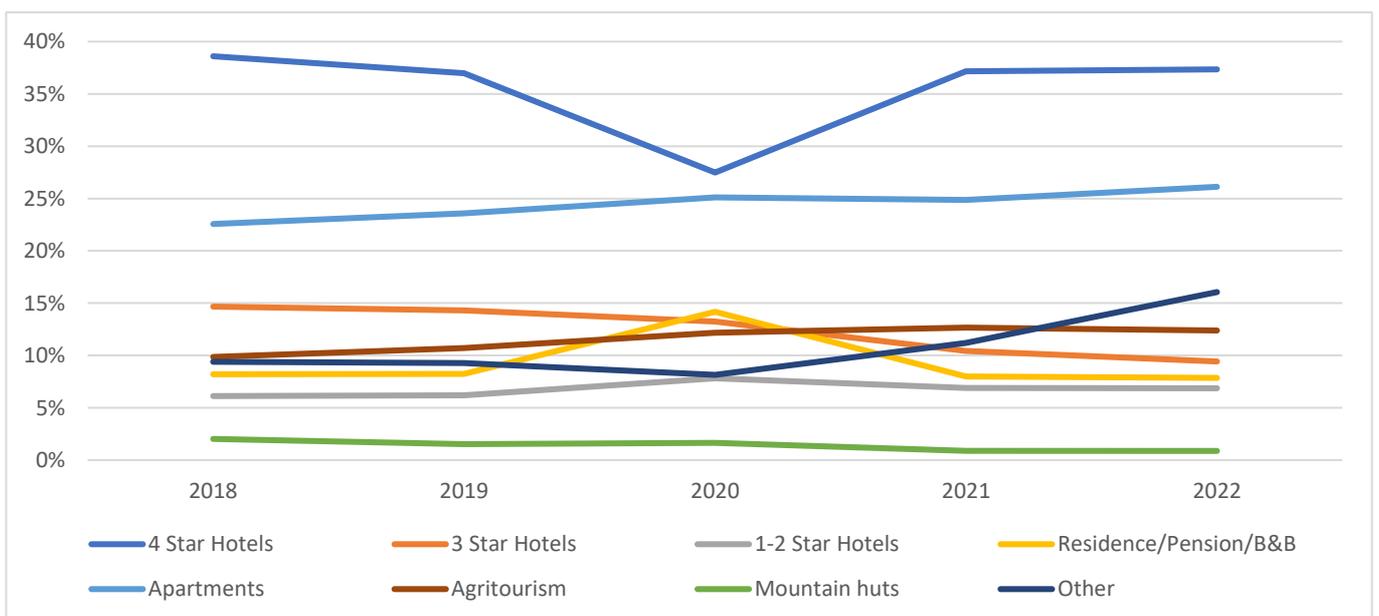


Figure 40: Evolution of the percentage of beds per accommodation type in relation to the overall beds in Werfenweng from 2018 to 2022 (Own elaboration, based on data from Statistics AT, 2023).

### 7.2.2 Gross bed availability & occupancy

Multiplying the available beds of Werfenweng (2,010 for 2022) with the days of the year (365) yield the gross bed availability, which is 733,650 beds. This number can then be used to calculate the gross bed occupancy, which is the relation between available and occupied beds (overnights), expressed as the percentage on a yearly or monthly basis. Unfortunately, this indicator does not consider the actual opening and closing days of the accommodation structures, an information, which is not easily retrievable.

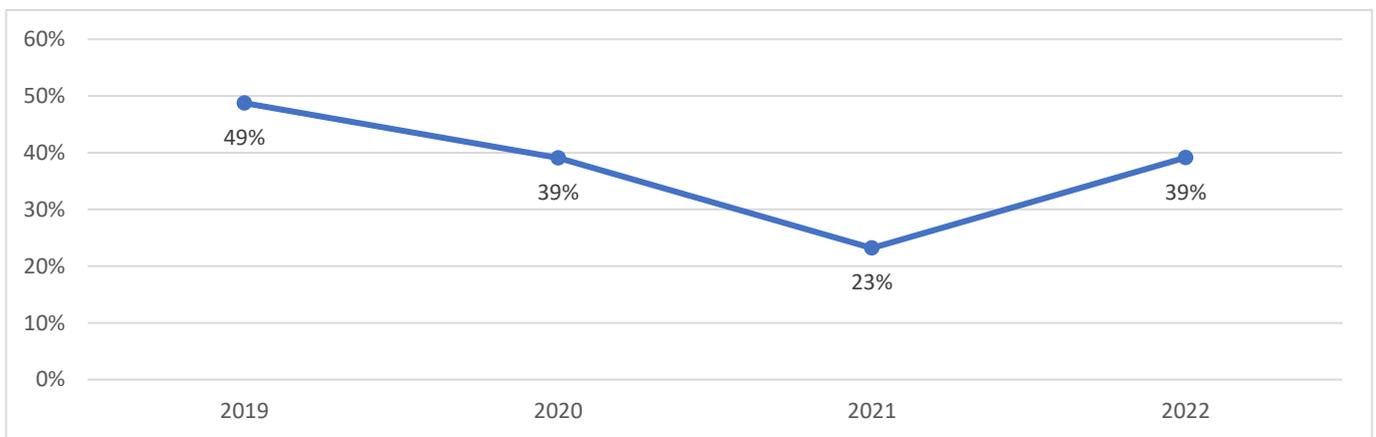


Figure 42: Evolution of the yearly gross bed occupancy in Werfenweng from 2019 to 2022 (Own elaboration, based on data from Statistics AT, 2023).

While during the pre-pandemic year of 2019 the yearly gross bed occupancy was at 48.8%, in 2022 it diminished to 39.1%. This reduction is partly influenced by the lower overnights in January and February 2022 (see chapter 7.1.1).

In order to identify where the infrastructural accommodation capabilities are severely underutilized throughout the year, it is necessary to consider the gross bed occupancy on a monthly basis.

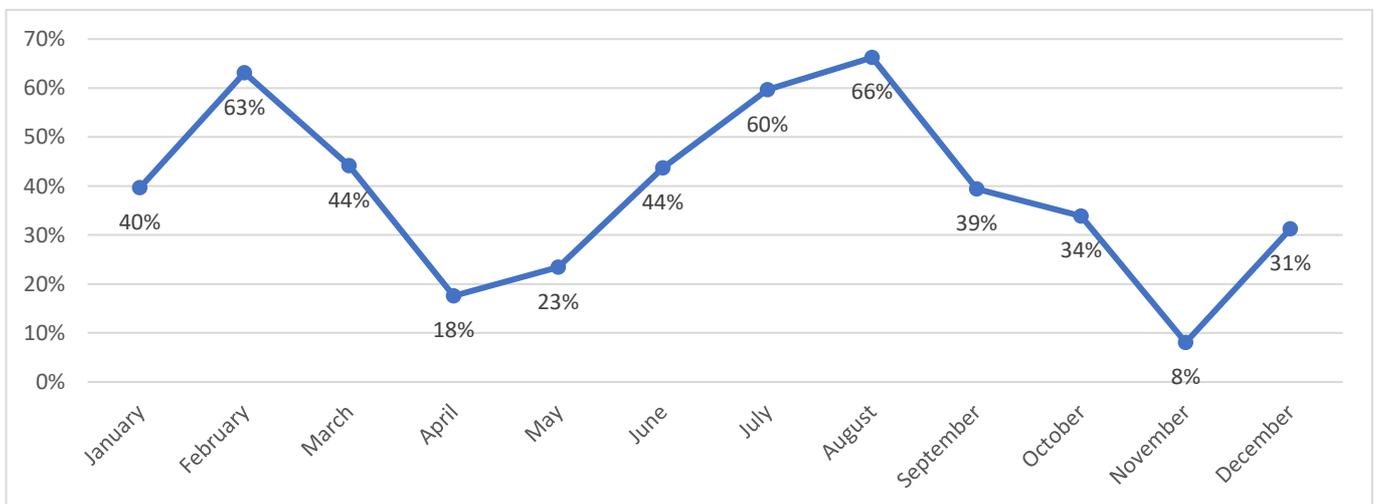


Figure 43: Gross Bed Occupancy 2022 (Own elaboration, based on data from Statistics AT, 2023).

The different monthly gross bed occupancies follow the tourism seasonality of Werfenweng, which is characterized by a traditional bi-seasonality of mountain tourism destinations with low season months (April and November). Although benefiting from quite strong summer shoulder seasons (especially June, September and October), the bed occupancy of the high season months (July 60% and August 66% in summer, February 63% in winter) still reveals underutilized bed capacity, which needs also to be taken into account during the definition of future development strategies.

### 7.3 Considerations for the future development

- Good data availability.
- Classic mountain bi-seasonality with shoulder seasons.
- Non-ski dependent activities and seasons can be expanded.
- New non-ski dependent activities can be based on existing activities and resources.
- The overnights within winter and summer seasons are almost equally distributed (winter season 2018/19 49.3% - summer season 2019 50.7; winter season 2021/22 41.3% - summer season 2022 58.7%). Considering climate change challenges, which can have negative effects on snow tourism activities, the destination exhibits a vulnerability in terms of potential tourism flow alterations. Different winter activities have a varying degree of snow dependency (e.g., skiing, cross-country skiing, winter hiking). Werfenweng will require an analysis of the activities undertaken by winter tourists, in order to more precisely define its vulnerability towards varying and decreasing snow conditions.
- Werfenweng is characterized by foreign tourism flows, which amounted to 81.7% of the overall overnights in 2022, a distribution which in 2019 was even higher (84.4% of overall overnights), resulting in a high dependency on foreign source markets.
- The average length of stay exhibits a very high variation between foreign and domestic guests in winter (winter season 2021/22: 4.87 against 3.42 days) and is even more accentuated in the summer (summer season 2022: 4.37 against 2.52 days). Werfenweng should consider also introducing measures which aim at increasing the average length of stay of domestic tourists (for ex., after evaluating the travel motives of domestic guests, develop activities, which are targeting these).
- Although foreign guests usually have a higher average length of stay as well as higher spending profiles in comparison to domestic guests, Werfenweng should also consider how increase its attractiveness also for the latter, since a higher share of domestic guests can contribute to the stability of tourism flows. As the Covid-pandemic also showed, destinations, which heavily rely on

foreign tourists, are more susceptible to external influences (for ex. Pandemics) which disrupt supranational tourism flows.

- The overnights are dominated by the presence of German guests, which, in 2022, represented 65% of the overall overnights, of which 64% of overnights are concentrated in the summer season (100,994 overnights). Other foreign source markets comprise the Netherlands (5%), the Czech Republic (2%) and Belgium (2%), while the remaining merged source markets represent 8% of the overall overnights.
- The 53 apartments have a total of 449 beds, which represent 22% of the overall beds of Werfenweng. In the absence of an internal organisation of them, these stakeholders can be very difficult to include in participative processes, due to a high fragmentation. It has also to be considered, if and how the apartment owners' market and inform their guests regarding the destination.
- The management of daily visitor flows is a big challenge. It represents a very important target group, but most of them arrive by car, contributing to the overall traffic.
- Deeper cooperation between the managing organisation of the ascent facilities and tourism association will be fundamental for the development of a (profitable) transition strategy.

## 8 PP07 – Bohinj (SI)

The altitude of the PWA extends from 500m to 1,800m, its height difference being therefore 1,250m. It offers 17 ascent facilities, 27 slopes and 35.5 slope km. Its 5 separate ski centres, connected by ski busses are:

- Vogel ski centre (8 ski lifts, altitude 569m – 1,800m)
  - The ski centre has no system for technical snowmaking, due to its location within the Triglav National Park
  - € 8.5 million investment in the new cable car and a more varied summer offer (archaeological park, bike park) started in summer 2023.
- Soriška planina ski centre (5 ski lifts, altitude 1270m - 1549m)
- Kozji hrbet ski centre (1 ski lift, altitude 555m – 633m)
- Senožeta ski centre (1 ski lift, altitude 580m - 690m)
- Pokljuka family ski centre (2 ski lifts, altitude 1283m – 1330m)

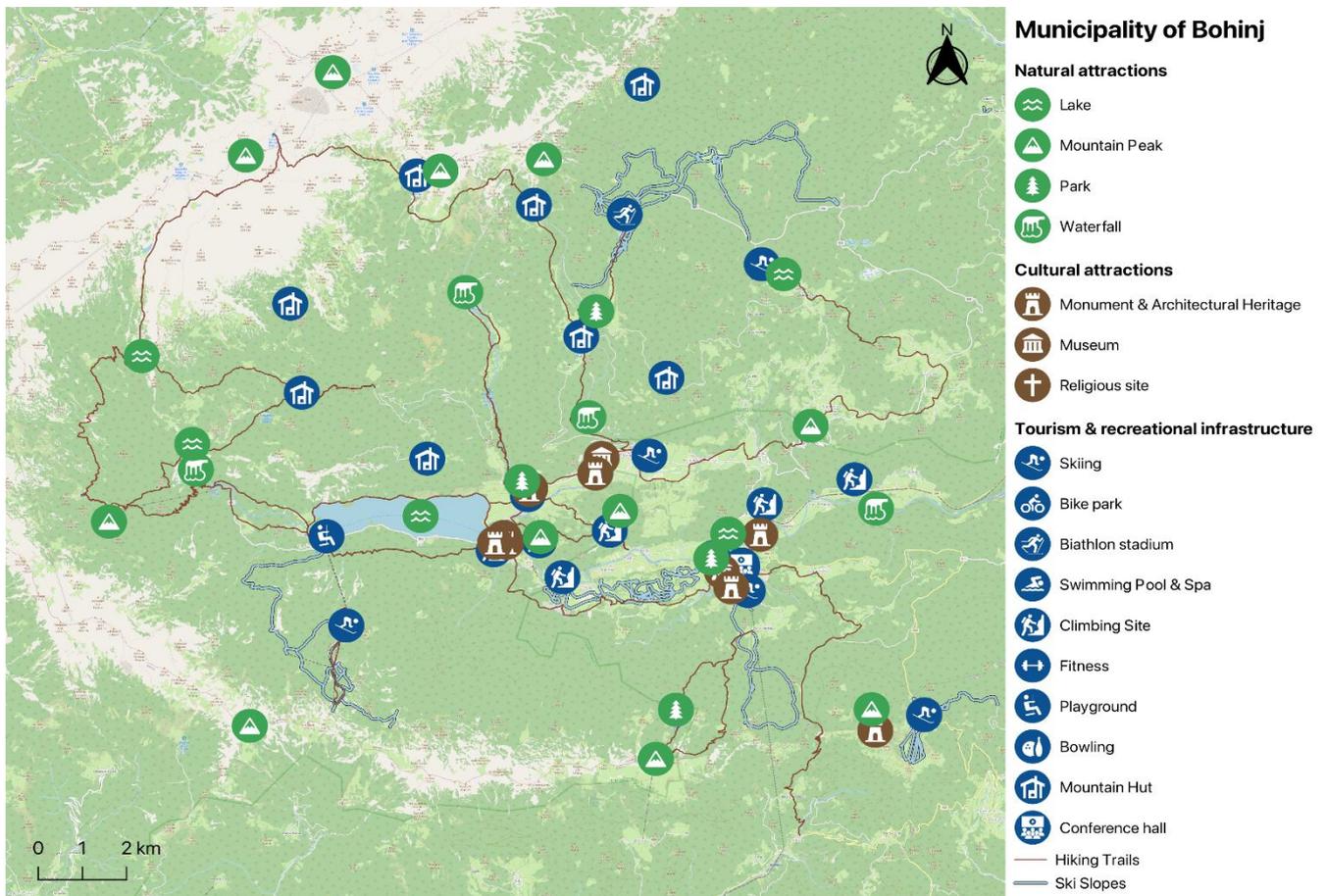


Figure 44: Overview of the Slovenian PWA Bohinj and its attractions (Own elaboration, based on the data provided by the partner)

Its main activities and attractions encompass the following:

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer	Events
Skiing & snowboarding	Natural & cultural sites	Natural & cultural sites	Winter:
Ski touring	Horseback riding	Hiking	Biathlon World Cup (Beginning of March)
Cross-country skiing	Gastronomy	Mountain biking	
Snowshoe hiking	Wellness areas	Road cycling	
Winter hiking	Indoor swimming pools	Climbing	Summer:
Sledding	Indoor bowling	Paragliding	International Wild Flower Festival (Mid-May - Beginning of June)
		Canyoning	Cow's Ball (September)
		Rafting, kayak & canoe	
		Wellness areas	
		Horseback riding	
		Fishing	
		Bike Park (since 2023)	
		Historic Park (since 2023)	

Table 10: Overview of the activities of Bohinj, divided into snow-specific, non-snow specific and summer activities.

The PWA Bohinj comprises the main municipality Občina Bohinj, which has an overall population of 5,676 inhabitants. The area of the municipality extends over 333.7 km<sup>2</sup> (Statistics SI, 2023)

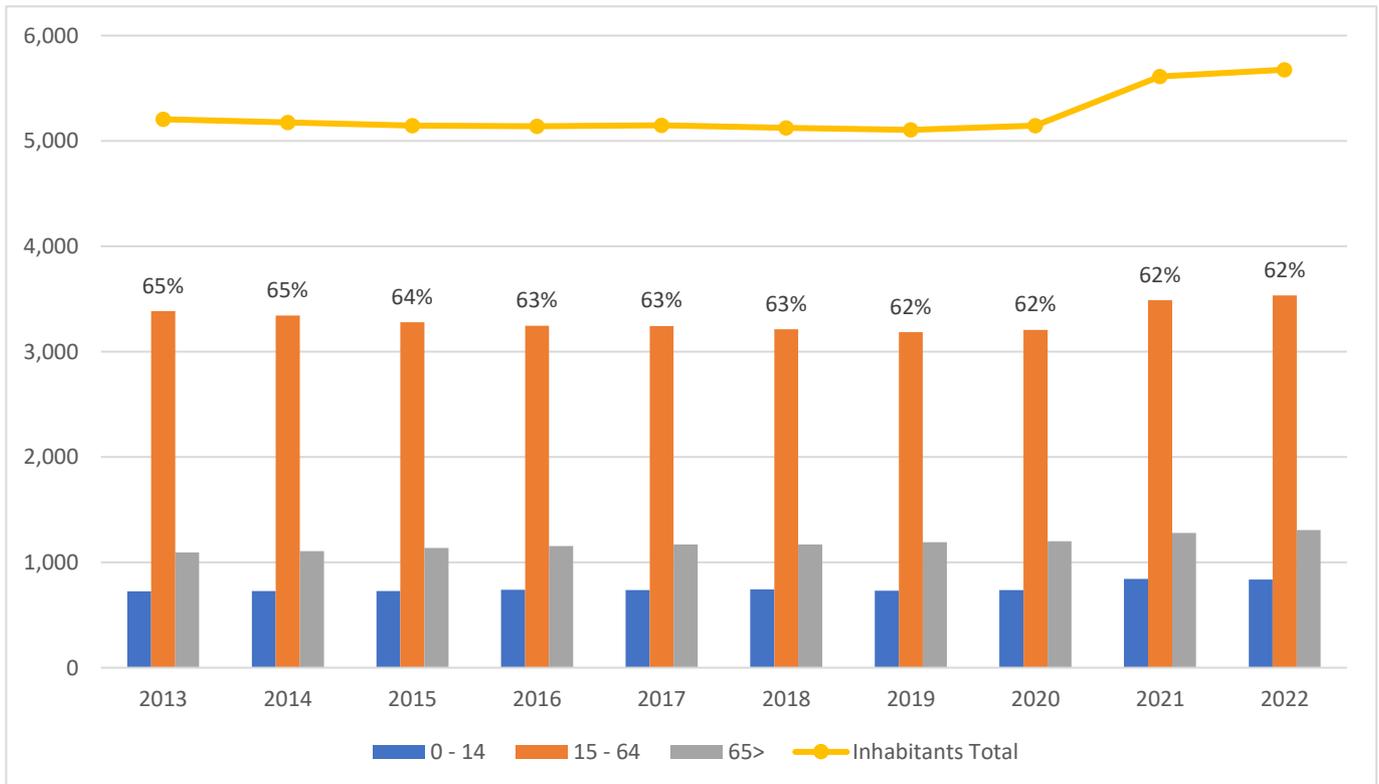


Figure 45: Development of the population and the different age groups of Bohinj from 2013 to 2022. The data call-out represents the share of the potential working population (age 15 to 64) in relation to the overall inhabitants (Own elaboration, based on data from Statistics SI, 2023).

Throughout the last 10 years, the population of Bohinj has remained relatively stable. The “jump” of the overall population in the year 2021 has been explained by the registering of the permanent residence of owners of 2<sup>nd</sup> homes in Bohinj due to movement restrictions during the Covid-19 pandemic.

In 2022 there were 939 2<sup>nd</sup> homes in Bohinj. In relation to the 5,676 inhabitants, the presence of 2<sup>nd</sup> homes should not be neglected, especially if considering the number of households in Bohinj, which is 2,257.

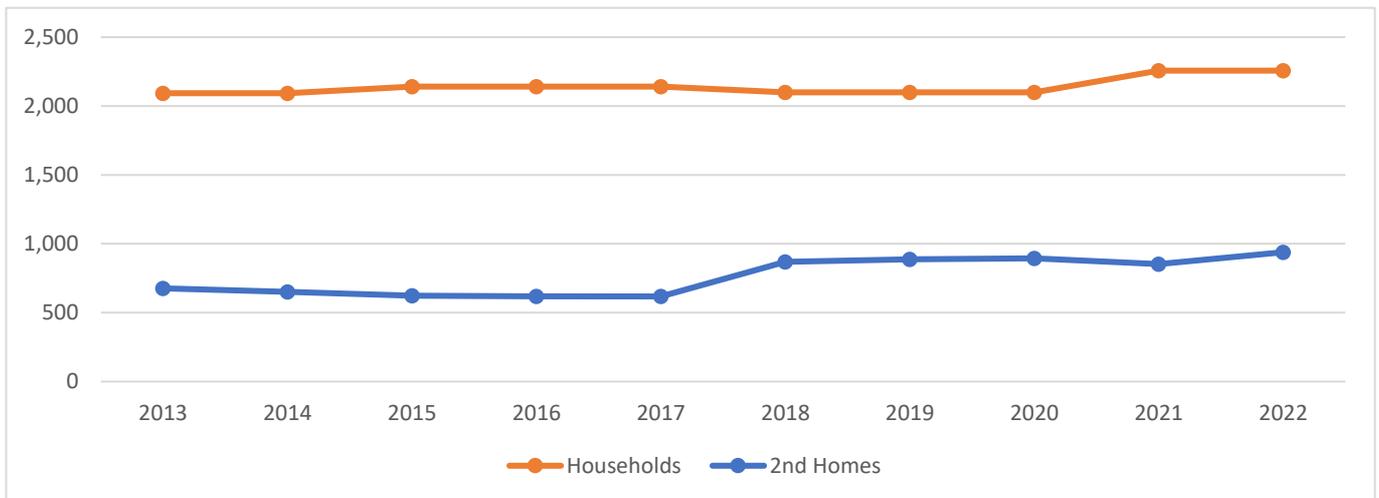


Figure 46: Evolution of the number of households and 2<sup>nd</sup> homes from 2013 to 2022 (Own elaboration, based on data from Statistics SI, 2023).

Putting those two numbers into proportion, yield one 2<sup>nd</sup> home for each 2.4 households. Considering that typically 2<sup>nd</sup> homes are utilized only during specific days (mainly on weekends) and weeks (main holidays) of the year, their quite high number can be translated into an inverse relation between local inhabitants and the housing infrastructure. Furthermore, an increasing trend of 2<sup>nd</sup> homes can result in a form of depopulation, which can have a diminishing effect on the provision of basic services for the permanent inhabitants. Especially privately owned businesses, such as gastronomy services, strongly align their services and opening days on the physical presence of customers. In the absence or reduced quantities of the latter, those businesses tend to concentrate their services only on high tourism seasons, reducing their service to a minimum throughout the remaining part of the year.

## 8.1 TI - Tourism demand

### 8.1.1 Yearly arrivals & overnight stays

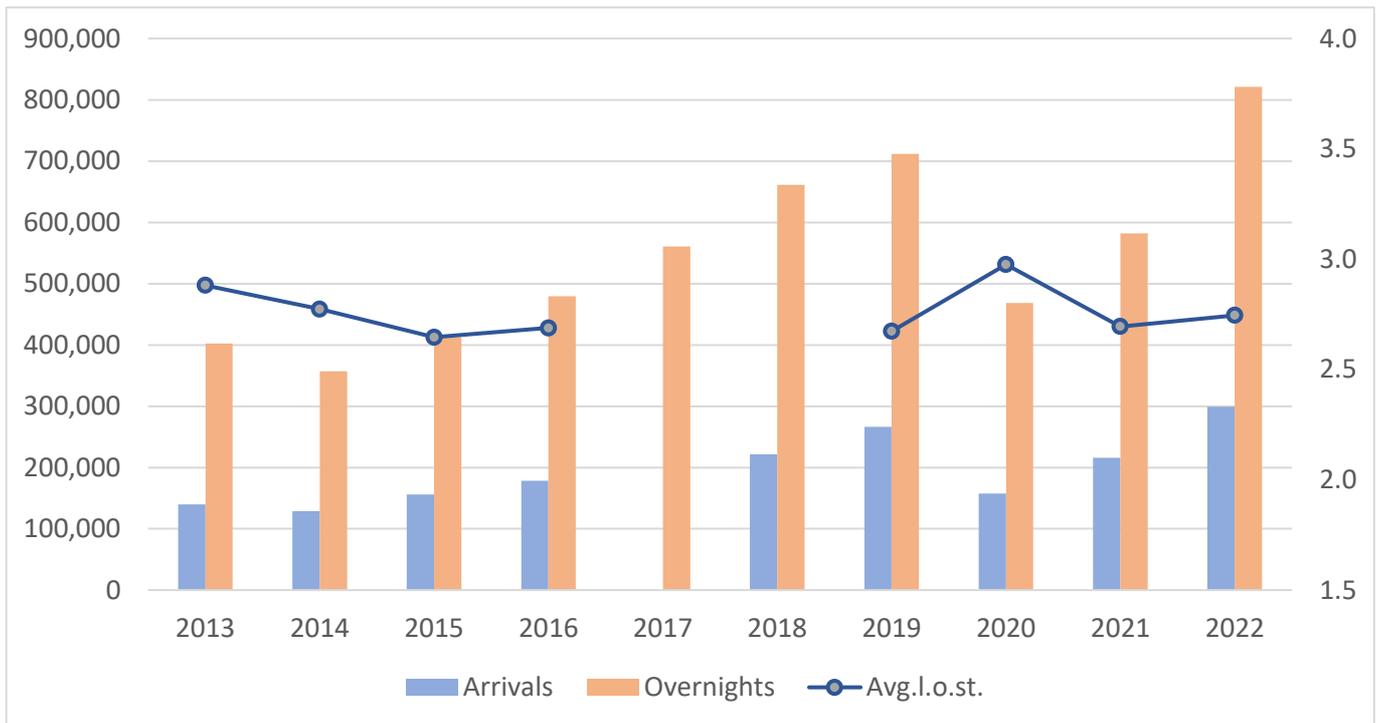


Figure 47: Year arrivals, overnight stays and average length of stay from 2013 to 2022 (Own elaboration, based on data from Statistics SI, 2023).

The yearly number of arrivals and overnight stays between the years 2013 and 2022 saw a quite steady increase. Starting at 2.9, the average length of stay gradually declined until reaching 2.7 days in 2022<sup>4</sup>. The highest average length of stay of 3.0 days in 2020, has to be treated with caution, due to the non-representativeness of the Covid-19 pandemic. Due to the slow recovery phase of the domestic and international tourism flows, the first representative year after the pandemic is considered to be 2022. In 2022 Bohinj has seen an all-time high of arrivals and overnights stays, which were respectively 299,053 (arrivals) and 820,939 (overnights). Referring to 2013, in 2022 both arrivals and overnights more than doubled (arrivals +114.2%, overnights +104.1%). The slightly minor increase of the overnights in comparison to the arrivals resulted in a diminishment of the average length of stay from 2.88 days in 2013 to 2.75 in 2022. This means that on average overnight guests spent less nights during their vacation in the destination.

<sup>4</sup> Due to the absence of arrival data for the whole of 2017 and the first 2 months of 2018, the average length of stay for 2017 and 2018 has been omitted.

In respect to 2019 as the last year before the pandemic, 2022 still saw an increase of arrivals (+12.3%) and overnights (+15.4%). The slightly higher increase of the overnights in comparison to the arrivals, resulted in an increase of the average length of stay from 2.67 days in 2019 to 2.75 days in 2022. This means that on average overnight guests spent more nights during their overall vacation in the destination.

### 8.1.2 Arrivals & overnight stays: Winter & summer season

In the case of Bohinj, the tourism flows are distributed between the winter and summer season in the following way:

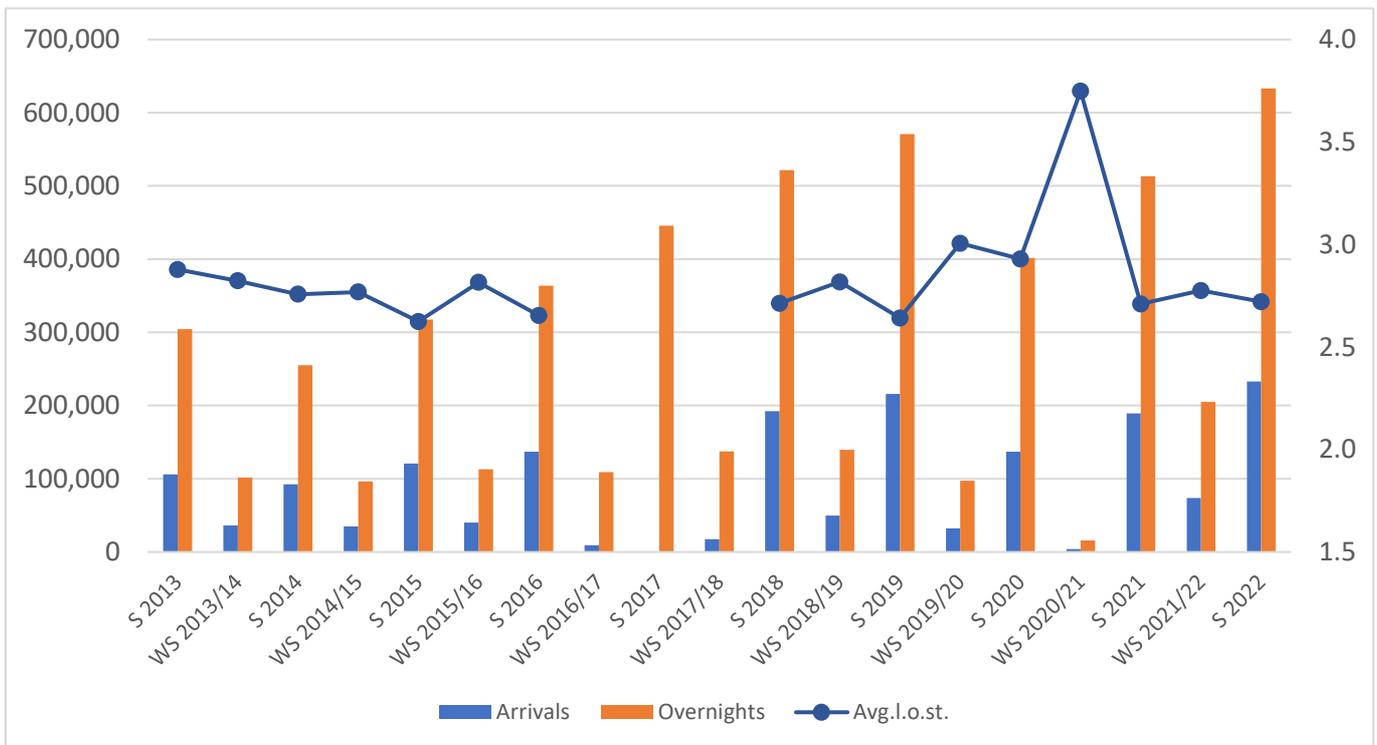


Figure 48: Arrivals, overnight stays and average length of stay divided between winter & summer seasons from 2013 to 2022 (Own elaboration, based on data from Statistics SI, 2023)

Relating to the arrivals & overnights, Bohinj exhibits a stronger summer season in comparison the winter season. The average distribution of overnights between winter and summer starting with the summer season 2013<sup>5</sup> (excluding 2020) amounts to 22.5% in winter and 77.5% in summer (current overnights distribution: WS 2021/22 24.5%, SS 2022 75.5%). The average length of stay is slightly higher in winter than in summer (between 2013 and 2022: 2.96 days in winter, 2.74 days in summer).

<sup>5</sup> Due to the absence of the arrival & overnights data for November and December 2012, the starting season is the summer season 2014.

Comparing 2019 to 2022, an increase in the share of winter tourism flows can be seen. While the comparison of the overnights of the summer season 2019 to 2022 yielded an increase of +11.0% (633,209 overnights in SS 2022), the same comparison in respect to the winter season 2018/19 and 2021/22 saw an increase of +46.9% (205,217 overnights in WS 2021/22).

### 8.1.3 Domestic & foreign guests

Based on the overnights data from the year 2013 to 2022, the average share between domestic and foreign guests is 33% domestic and 66% foreign<sup>6</sup>, shares which in 2022 have increased towards foreign guests (30% domestic, 70% foreign guests). A slightly higher average length of stay with regards to the foreign guests can be identified (2.61 days for domestic, 2.81 days for foreign guests).

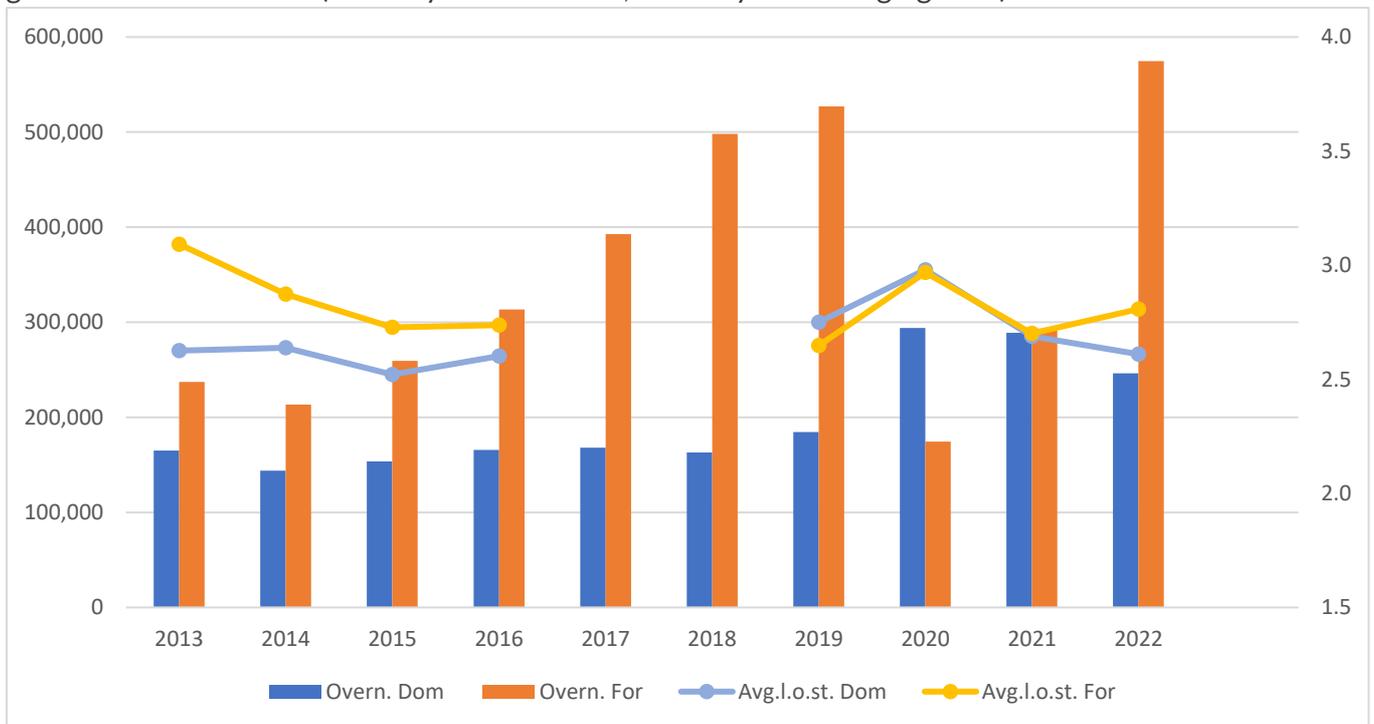


Figure 49: Overnight stays divided between domestic & foreign guests (Own elaboration, based on data from Statistics SI, 2023)

<sup>6</sup> For the calculation of the average, the share of the year 2020 and 2021 have been omitted.

Alpine Space

Referring to 2013, in 2022 the domestic overnights saw an increase of 49.4% (from 164,913 overnights in 2013 to 246,432 in 2022), while the foreign overnights increased by 142.1% (from 237,340 to 574,507 in 2022). Between 2019 and 2022 the domestic overnights still increased by 33.6%, while the foreign overnights by 9.0%. While the former could be potentially interpreted as a follow-up effect of the Covid pandemic (domestic guests, which were not able to travel internationally during 2020 and only partially in 2021, discovered their domestic destinations), the latter seemed to be a re-stabilizing effect of the foreign tourism flows of 2019.

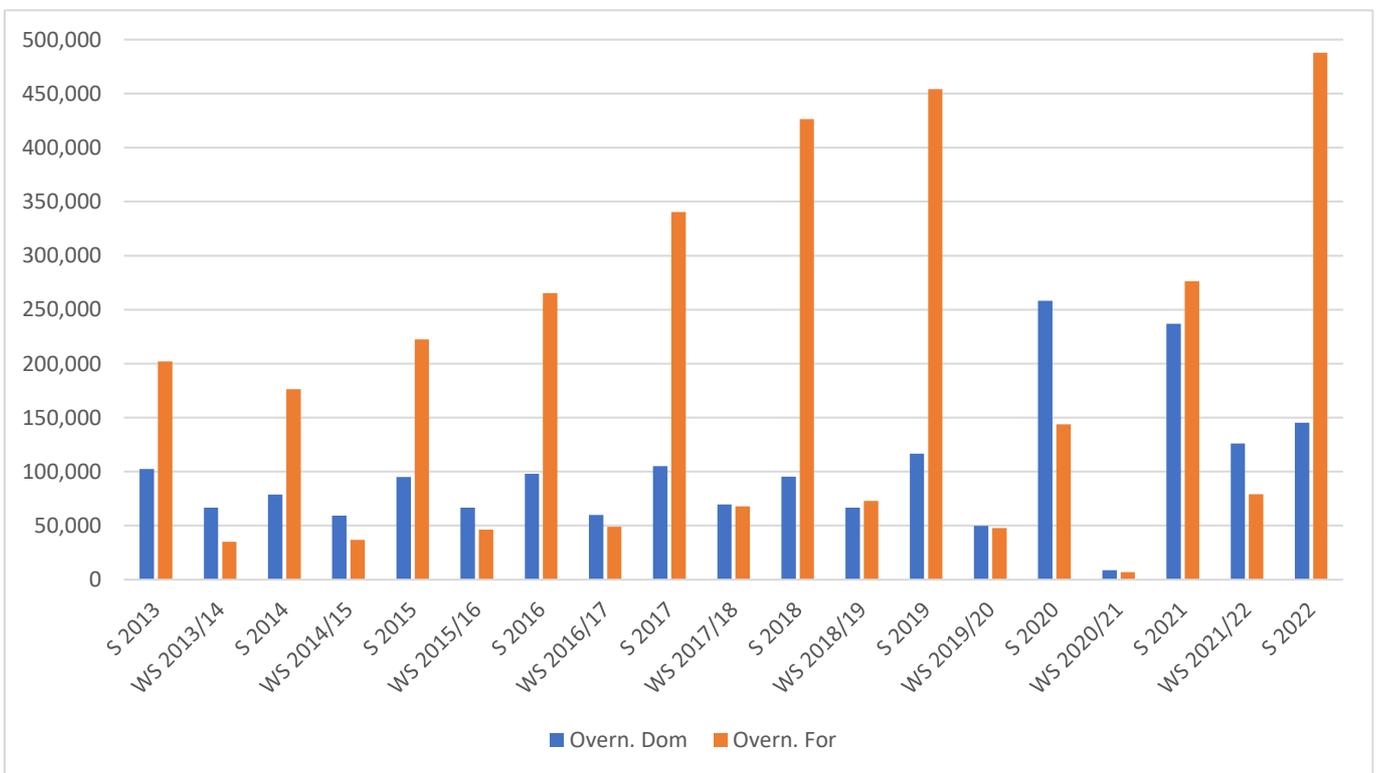


Figure 50: Overnight stays divided between winter & summer seasons and domestic & foreign guests from 2013 to 2022 (Own elaboration, based on data from Statistics SI, 2023)

Foreign guests seem to largely prefer the summer season, during which, on average they represent 74.2% of the overall guests. In the year 2022 their share went up to 77.1%. Furthermore, in comparison to the domestic guests, the average length of stay of foreign guests is higher both in the winter (2.96 against 2.76 days) and in the summer (2.8 against 2.62 days).

### 8.1.4 Foreign source markets

The analysis of the main foreign source markets can reveal insights regarding the already established foreign customer base and the relevance of the destination Bohinj in different international contexts. Regarding the future development of the destination, this becomes even more important considering that the foreign guests represent between 66% and 70% of the overall overnight stays. Currently, the foreign travel flows are mainly concentrated in the summer (on average 89% of foreign overnight stays are generated in the summer season).

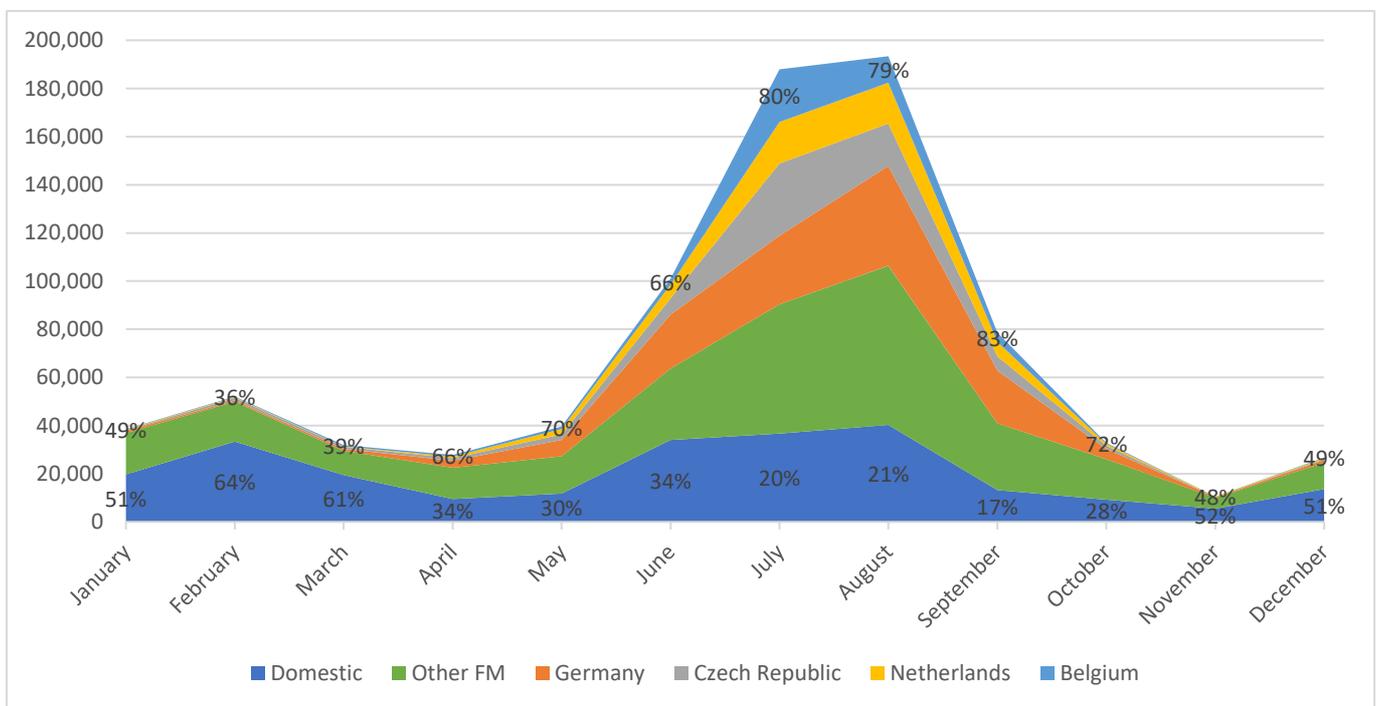


Figure 51: Distribution of domestic & foreign overnights between the different source markets of the year 2022. The data callout represents the share in % between domestic & all foreign overnights (Own elaboration, based on data from Statistics SI, 2023).

Focusing on the 5 major foreign source markets, the first indication of the distribution of foreign overnights of the year 2022 in the figure above is that the foreign tourism flows seem to be quite fragmented between different foreign source markets. This is derived from the fact, that the largest foreign market is “Other Foreign Markets” and represents 34% of the overall overnights, while the second largest foreign market is Germany with 16%, followed by Czech Republic (8%), Netherlands (6%) and Belgium (5%). While the single foreign overnights are mostly located within the summer season, the other foreign overnights are also strongly present during the winter season, partially matching or even exceeding the domestic overnights. For a future potential development of the winter season, the other foreign markets could be further analysed, in order to understand what nationalities are present in the winter, and what drives their motivation to visit Bohinj during the winter season.

## 8.2 T2 – Tourism accommodation

### 8.2.1 Accommodation structures & bed places

Bohinj features an accommodation sector, which has been steadily growing until the year 2023, where it saw a minor diminishment of bed places.

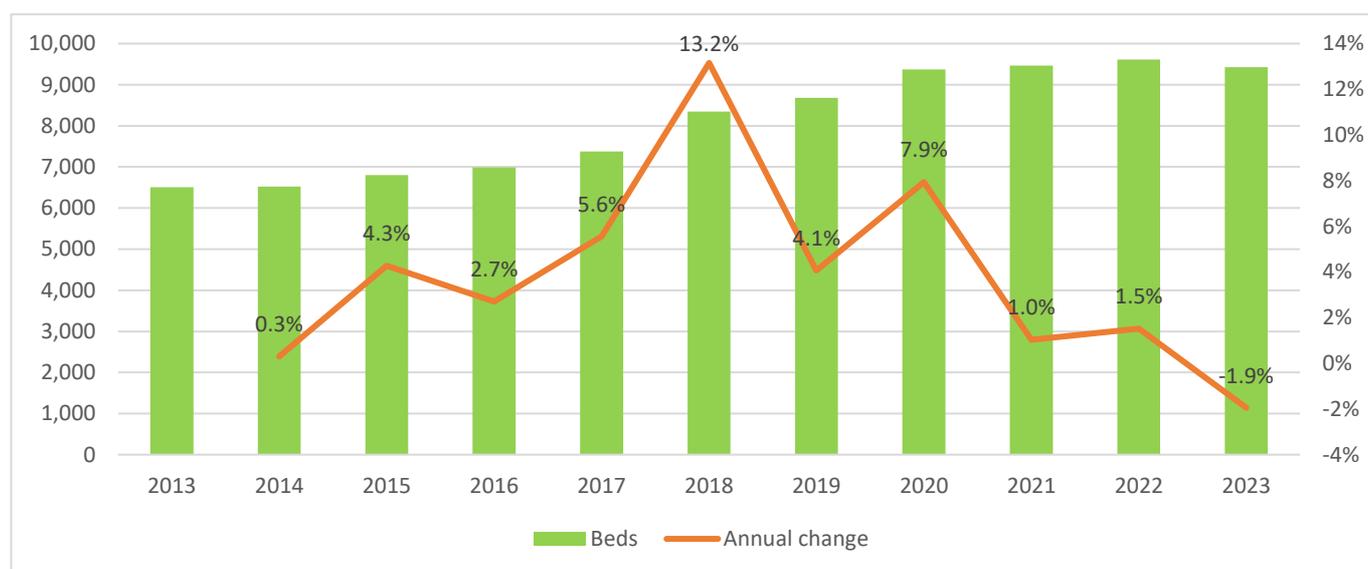


Figure 52: Number of beds from 2013 to 2023, and their annual change (Own elaboration, based on data from Statistics SI, 2023).

In general, the number of bed places in Bohinj grew by 44.5% between 2013 (6,503 beds) and 2023 (9,426 beds). Bohinj’s accommodation sector is varied concerning the presence of different accommodation types, although specific accommodation structures seem to dominate in terms of the overall bed places.

2023	Number of structures	Number of beds	Avg. beds x structure	Share of overall beds
4 Star Hotels	3	505	168	5.4%
3 Star Hotels	9	446	50	4.7%
1-2 Star Hotels	1	36	36	0.4%
Residence/Pension/B&B	10	282	28	3.0%
Apartments	476	3,916	8	41.5%
Camping	4	2,350	588	24.9%
Agritourism	11	148	13	1.6%
Mountain huts	15	831	55	8.8%
Hostels	6	299	50	3.2%
Holiday Homes	49	381	8	4.0%
Other	10	232	23	2.5%
<b>Total</b>	<b>594</b>	<b>9,426</b>		<b>100.0%</b>

Table 11: Number of structures and beds per accommodation type in 2023 (Own elaboration, based on data from Statistics SI, 2023).

With 476 structures and 3,916 bed places, the most prominent accommodation type in Bohinj are the apartments, with a share of 41.5% of the overall beds, followed by Campings (which include also camping stops), with 24.9% of the overall beds. Combining all the hotel categories, their share amounts to 10.5% of Bohinj’s beds. The average beds per structure follow a classic pattern (campings usually have the highest number of “beds” due to the recording modality, which is influenced by their large infrastructure), especially regarding hotels. Hotels of the higher categories typically feature a larger infrastructure and ancillary amenities, which can contribute also to extend the average length of stay of guests, due to the proposal of additional activities. Although having the highest number of beds, the apartments (together with holiday homes) have the lowest average beds per structure.

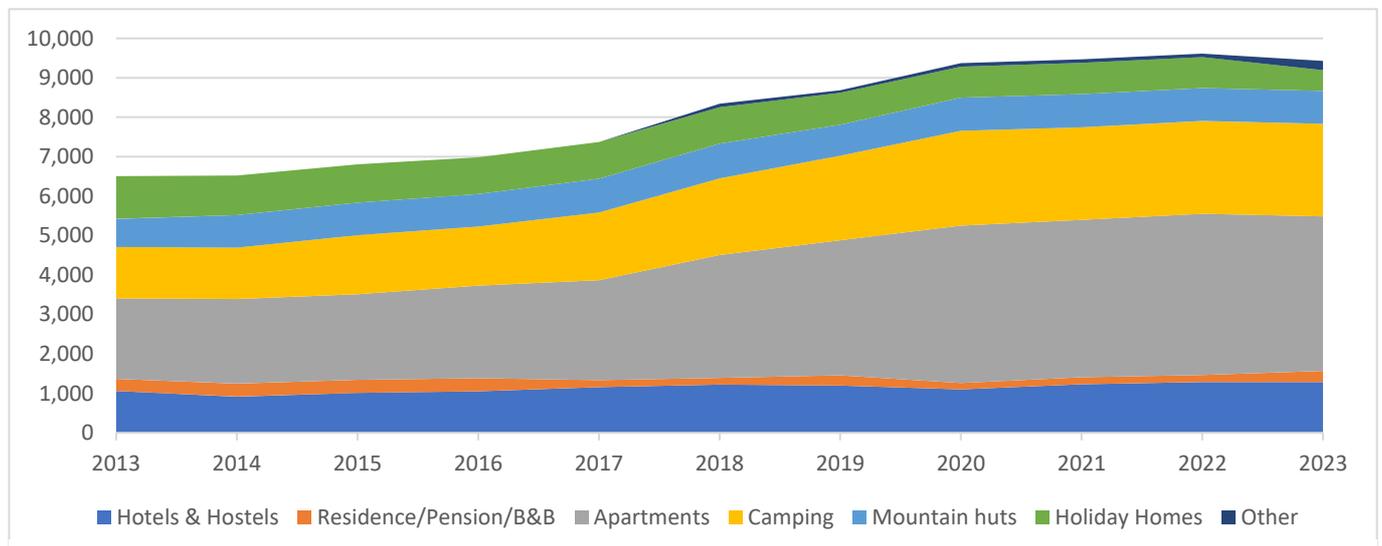


Figure 53: Evolution of beds per accommodation type from 2013 to 2023 (Own elaboration, based on data from Statistics SI, 2023)

Looking at the evolution of the accommodation sector of Bohinj, a slight shift towards certain accommodation types can be identified. This shift becomes even more apparent, if the development of the share of beds per accommodation type is represented.

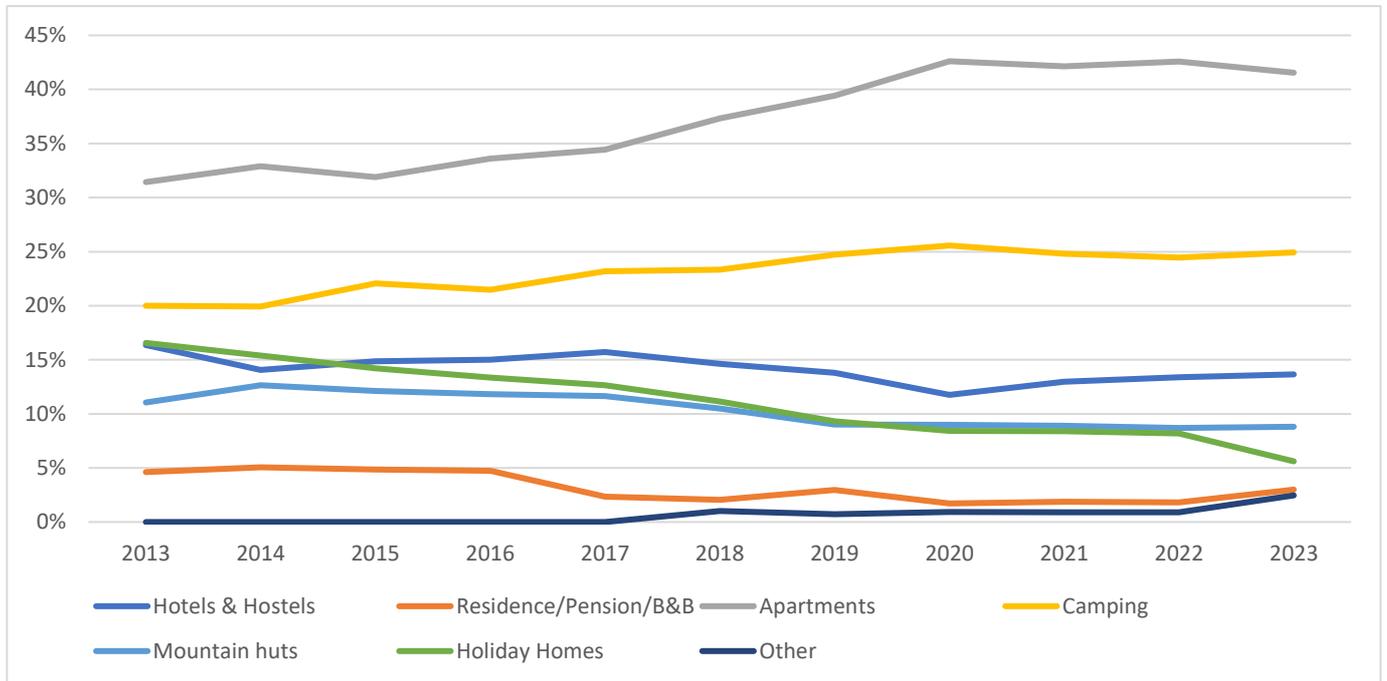


Figure 54: Evolution of the percentage of beds per accommodation type in relation to the overall beds in Bohinj from 2013 to 2023 (Own elaboration, based on data from Statistics SI, 2023).

Starting with a share of 31% of the overall beds, the apartments in 2023 reached 42%, which represents the largest increase within this timeframe. While hotels & hostels saw a minor increase from 16% in 2013 to 14% in 2023, the largest decrease has been observed within the category holiday homes, which diminished from 17% in 2013 to only 6% in 2023.

### 8.2.2 Gross bed availability & occupancy

Multiplying the available beds of Bohinj (9,426 for 2022) with the days of the year (365) yield the gross bed availability. This number can then be used to calculate the gross bed occupancy, which is the relation between available and occupied beds, expressed as the percentage on a yearly or monthly basis. Unfortunately, this indicator does not consider the actual opening and closing days of the accommodation structures, an information, which cannot be obtained.

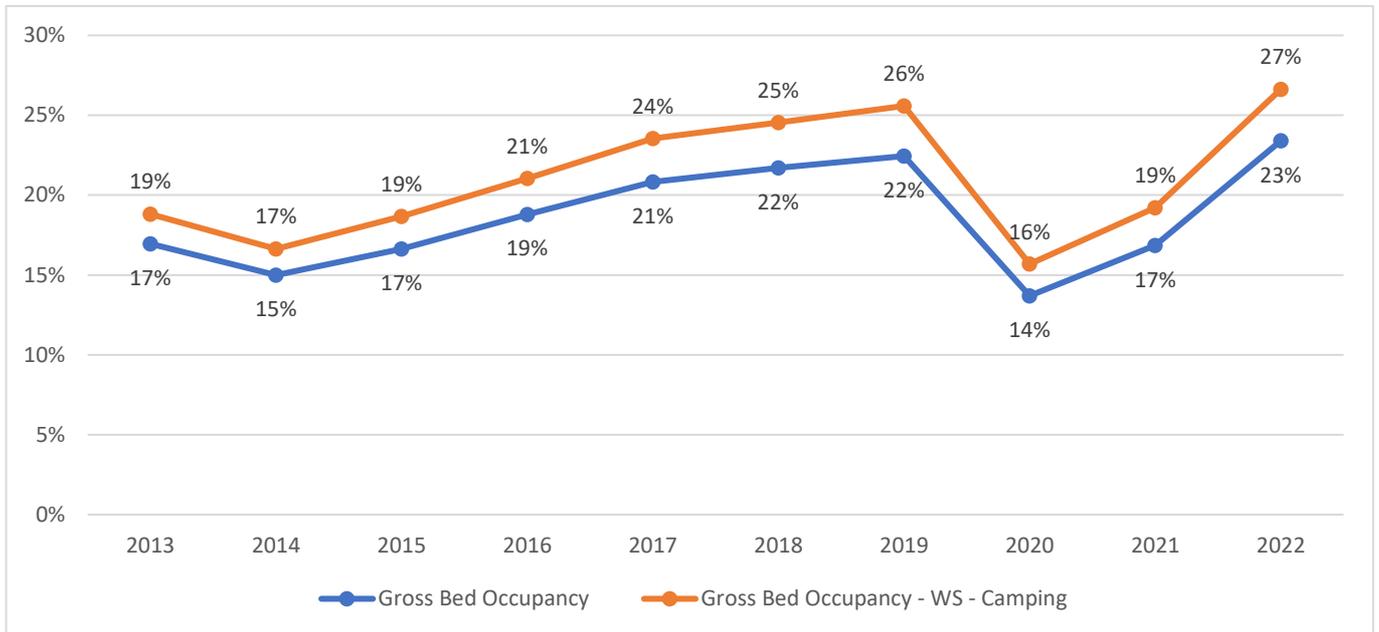


Figure 55: Yearly Gross Bed Occupancy from 2013 to 22 with and without considering the camping beds in the winter season (Own elaboration, based on data from Statistics SI, 2023).

To still slightly take into account the different seasonal conditions in relation to the different accommodation types, the beds registered under the category Camping, traditionally closed during the colder periods of the year, have been omitted during the winter season (from November to April) for the calculation of the second indicator (Gross Bed Occupancy - WS – Camping), although the adjustment effect remained solely between the range increase of +1.6% and +3.2% throughout the months of the winter season.

Even though being able to fully recover from the pandemic, and going even beyond the levels of 2019, the yearly gross bed occupancy of Bohinj in 2022, which lies between 23% and 27%, has still high margins of improvement. In order to identify where the infrastructural accommodation capabilities are severely underutilized throughout the year, it is necessary to consider the gross bed occupancy on a monthly basis.

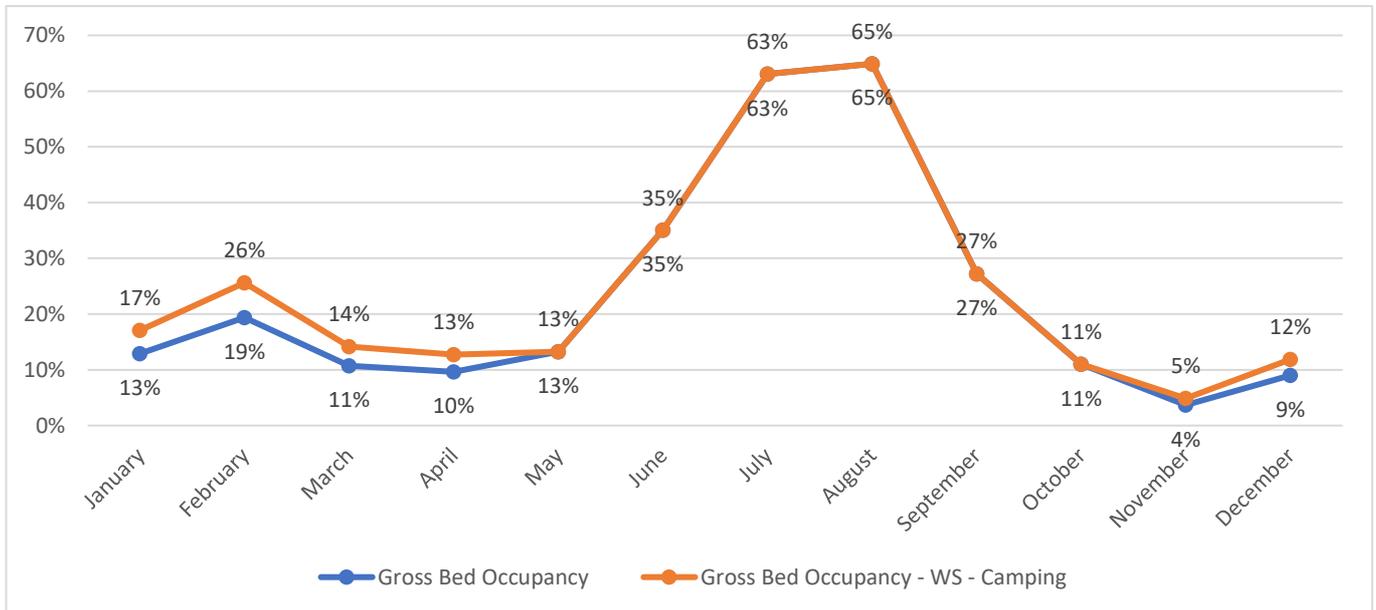


Figure 56: Gross bed occupancy for the year 2022 (Own elaboration, based on data from Statistics SI, 2023).

Next to the traditional low season months (April and November) and the shoulder seasons (May, June, September, October), the high winter season months exhibit a large margin of improvement in terms of gross bed occupancy. Furthermore, also the summer high season months, with an occupancy of 63% (July) and 65% (August) should still be considered during the elaboration of strategy development options for improving the gross bed occupancy.

## 8.3 Socioeconomic indicators

### 8.3.1 Economic structure

The analysis of the economic structure of Bohinj, based on the data collected regarding the composition of the net value added of the municipality, is based on the NACE Rev2 activities (Eurostat, 2008).

Code	NACE Rev2 Title	Amount	%
A	Agriculture, forestry and fishing	€ 977,607	2.3%
B	Mining and quarrying	€ 0	0.0%
C	Manufacturing	€ 15,236,291	35.3%
D	Electricity, gas, steam and air conditioning supply	€ 169,786	0.4%
E	Water supply; sewerage, waste management and remediation activities	€ 235,784	0.5%
F	Construction	€ 2,184,444	5.1%
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	€ 613,074	1.4%
H	Transportation and storage	€ 5,279,317	12.2%
I	Accommodation & food service activities	€ 11,359,993	26.4%

J	Information and communication	€ 208,144	0.5%
K	Financial and insurance activities	€ 0	0.0%
L	Real estate activities	€ 803,278	1.9%
M	Professional, scientific, and technical activities	€ 1,763,108	4.1%
N	Administrative and support service activities	€ 520,694	1.2%
O	Public administration and defence; compulsory social security	€ 160,975	0.4%
P	Education	€ 149,224	0.3%
Q	Human health and social work activities	€ 1,591,696	3.7%
R	Arts, entertainment, and recreation	€ 1,238,037	2.9%
S	Other service activities	€ 619,445	1.4%
T	Activities of households as employers	€ 0	0.0%
U	Activities of extraterritorial organisations and bodies	€ 0	0.0%
<b>Total Net Value Added</b>		<b>€ 43,110,898</b>	<b>100.0%</b>

Table 12: Structure of the Net Value Added of the municipality of Bohinj in 2022, based on the NAVE Rev2 categories (Own elaboration, based on data from Statistics SI, 2023).

The economic structure of Bohinj appears to be quite undiversified, since the sum of the two largest categories (manufacturing 35% and accommodation & food service activities 26%) amounts to almost 62% of the overall net value added.

Also an high economic reliance on the tourism sector can be risky, because of the high volatility and vulnerability to sudden external disruptions of the sector (such as natural disasters, pandemics, terrorism and political instability) (Becken et al., 2014). Furthermore, being the overnights mainly concentrated in a specific season (68% of overnights from June to September), the economic vulnerability of Bohinj seems to be quite high. Relying heavily on ideal conditions necessary for allowing guests to pursue tourism activities, but also for preserving the safety and security of the guests themselves, the emergence of sudden shocks, such as natural disasters, can negatively influence the attractiveness of the destination and its tourism sector and with it the overall economy of Bohinj. Moreover, slow onset events, such as changing preferences of guests and their visit of alternative or competing destinations, can have negative influences on the overall tourism flows, if not identified in a timely manner. Finally, destinations, which rely heavily on the tourism sector, exhibit an even higher economic vulnerability due to the strong interrelationships between other economic sectors and tourism. These can be, for example, agriculture (as potential provider of local products to accommodation and gastronomy), construction (as maintainer of tourism infrastructure) and other sectors.

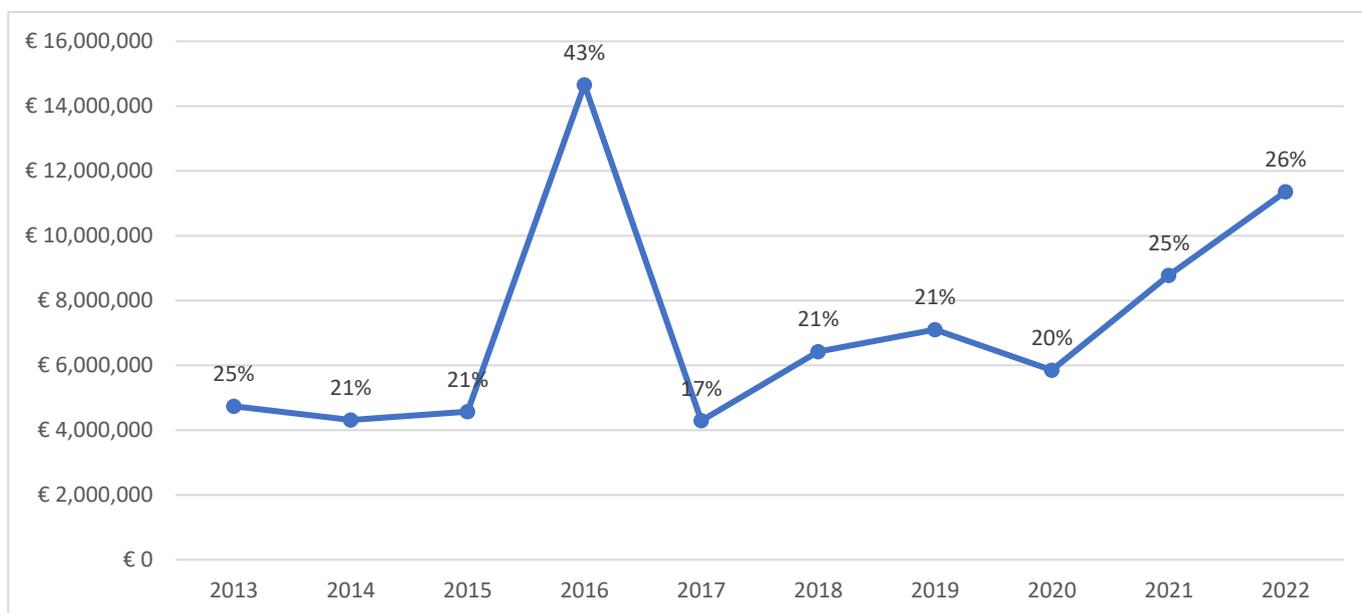


Figure 57: Evolution of the net value added of the Accommodation & Food Service Sector between 2013 and 2022. The data call-out represents the sector's share in relation to the overall net value added (Own elaboration, based on data from Statistics SI, 2023).

With exception of the year 2016 (the data of which is subject to re-verification by the data provider), the net value added of the Accommodation & food service activities sector has seen an increase of 140% between the year 2013 and 2022, outgrowing the 126% increase of Bohinj's overall net value added.

While Bohinj's overall net value added grew by 27% between 2019 and 2022, the Accommodation & food service activities sector's net added value still grew by 60%, amounting to more than 11 Mio. € in 2022 and having the second highest growth rate of all the single sectors (surpassed only by agriculture, with a growth rate of 62%).

### 8.3.2 Employment

Code	NACE Rev2 Title	Persons employed	%
A	Agriculture, forestry and fishing	105	6.6%
B	Mining and quarrying	0	0.0%
C	Manufacturing	390	24.5%
D	Electricity, gas, steam and air conditioning supply	Conf.	Conf.
E	Water supply; sewerage, waste management and remediation activities	Conf.	Conf.
F	Construction	113	7.1%
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	77	4.8%
H	Transportation and storage	84	5.3%
I	<b>Accommodation &amp; food service activities</b>	346	21.7%
J	Information and communication	9	0.6%
K	Financial and insurance activities	Conf.	Conf.
L	Real estate activities	6	0.4%

M	Professional, scientific, and technical activities	91	5.7%
N	Administrative and support service activities	51	3.2%
O	Public administration and defence; compulsory social security	Conf.	Conf.
P	Education	123	7.7%
Q	Human health and social work activities	64	4.0%
R	Arts, entertainment, and recreation	42	2.6%
S	Other service activities	36	2.3%
T	Activities of households as employers	0	0.0%
U	Activities of extraterritorial organisations and bodies	0	0.0%
<b>Total persons employed</b>		<b>1,593</b>	<b>100.0%</b>

Table 13: Structure of the persons employed of the municipality of Bohinj in 2022, based on the NAVE Rev2 categories (Own elaboration, based on data from Statistics SI, 2023) The values marked as “Conf.” refers to the absence of information due to its confidential nature according to the law on national statistics.

In line with the distribution of the net value added, the sectors “Manufacturing” (24.5% of Bohinj’s overall workforce) and “Accommodation & food service activities” (21.7% of Bohinj’s overall workforce) are those which employed the most persons in 2022. Having two sectors, which together employ 46% of the overall workforce can be seen as the reflection of a marginally undiversified economic structure.

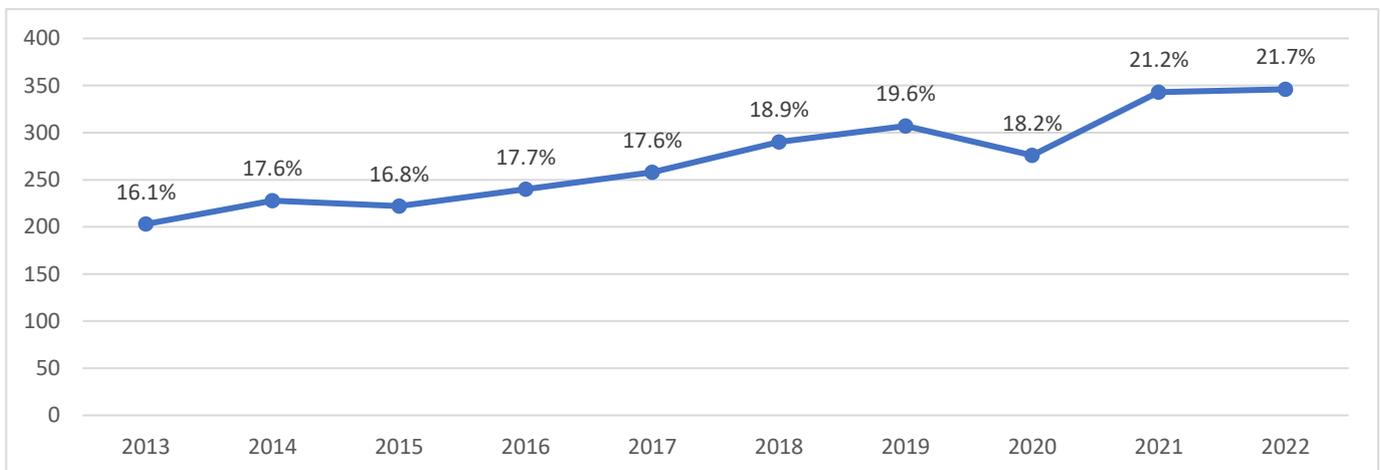


Figure 58: Evolution of the number of employees in the accommodation & food service sector between 2013 and 2022. The data call-out represents the sector’s share in relation to the overall employees in Bohinj (Own elaboration, based on data from Statistics SI, 2023).

While from 2013 to 2022 the overall number of employed persons in Bohinj grew by 26% (from 2019 to 2022 by 2%), during the same timeframe, the employees of the Accommodation & food service sector grew by 70% (from 2019 to 2022 by 13%).

Considering the volatility of the tourism sector, the reliance on it as one of the major employers can result in an increased socio-economic/social vulnerability in the case of a diminishment of attractiveness due to negative external factors (such as natural disasters, or even climate change combined with a lack of adaptation thereof).

## 8.4 Considerations for the future development

- Very good data availability.
- According to the monthly distribution of overnights, the PWA's overall tourism sector seems not to be overdependent on ski tourism.
- Presence of international events in winter & summer.
- Non-ski dependent activities and seasons can be expanded.
- New non-ski dependent activities can be based on existing activities and resources.
- Presence of domestic tourists during shoulder and low season.
- The overall reliance on natural snow is very high. The largest ski centre (Vogel with 8 ski lifts) has no technical snowmaking because of its location in Triglav National Park. Within the destination, there is 1 abandoned ski centre.
- The winter season and its shoulder seasons is not very strong (68% of overnights between June and Sept), which results into a touristic mono-seasonality (summer season).
- The annual average length of stay (2.75 days) & gross bed occupancy (23.9%) are both low. An increase of the latter could be achieved either by attracting more guests (but more guests mean more arrival and departure traffic and resource consumption) or by trying to increase the length of their stay (e.g., by offering more diversified activities). A combination of both strategies is advisable.
- The 476 apartments have a total of 3,916 beds, which account for 42% of the overall beds. In the absence of an internal organisation of them, these stakeholders can be very difficult to include in participative processes, due to a high fragmentation. It has also to be considered, if and how the apartment owners' market and inform their guests regarding the destination.
- The overall economic structure of Bohinj seems quite undiversified, with the sum of manufacturing (35%) and accommodation & food service activities (26%) amounting to almost 62% of the overall net value added. An undiversified economic structure can result into an overdependency on certain sectors. If one of these sectors is the very volatile tourism sector, the economic vulnerability of the destination can be very high, amplified also by its mono-seasonal alignment.
- Although benefiting from quite strong summer shoulder seasons (especially June, September, and October), also the bed occupancy of the high season months (July 60% and August 66% in summer, February 63% in winter) still reveals underutilized bed capacity, which needs also to be taken into account during the definition of future development strategies.

## 9 PP09 – Großer Arber (DE)

The altitude of the PWA extends from 1,050m to 1,456m, its height difference being therefore 406m. It offers 19 ascent facilities, 11 slopes and 12 slope km.

The PWA Großer Arber comprises the main municipality of Bodenmais and Bayerisch Eisenstein. The latter encompasses the area in which the ski infrastructure is located, while Bodenmais figures as the main tourism centre, due to the location of the accommodation infrastructure and tourism product development there. Therefore, the quantitative data, especially regarding the tourism flows, are focused on the municipality of Bodenmais. The municipality, which has an overall population of 3,585 inhabitants. The area of the municipality extends over 45.28 km<sup>2</sup>.

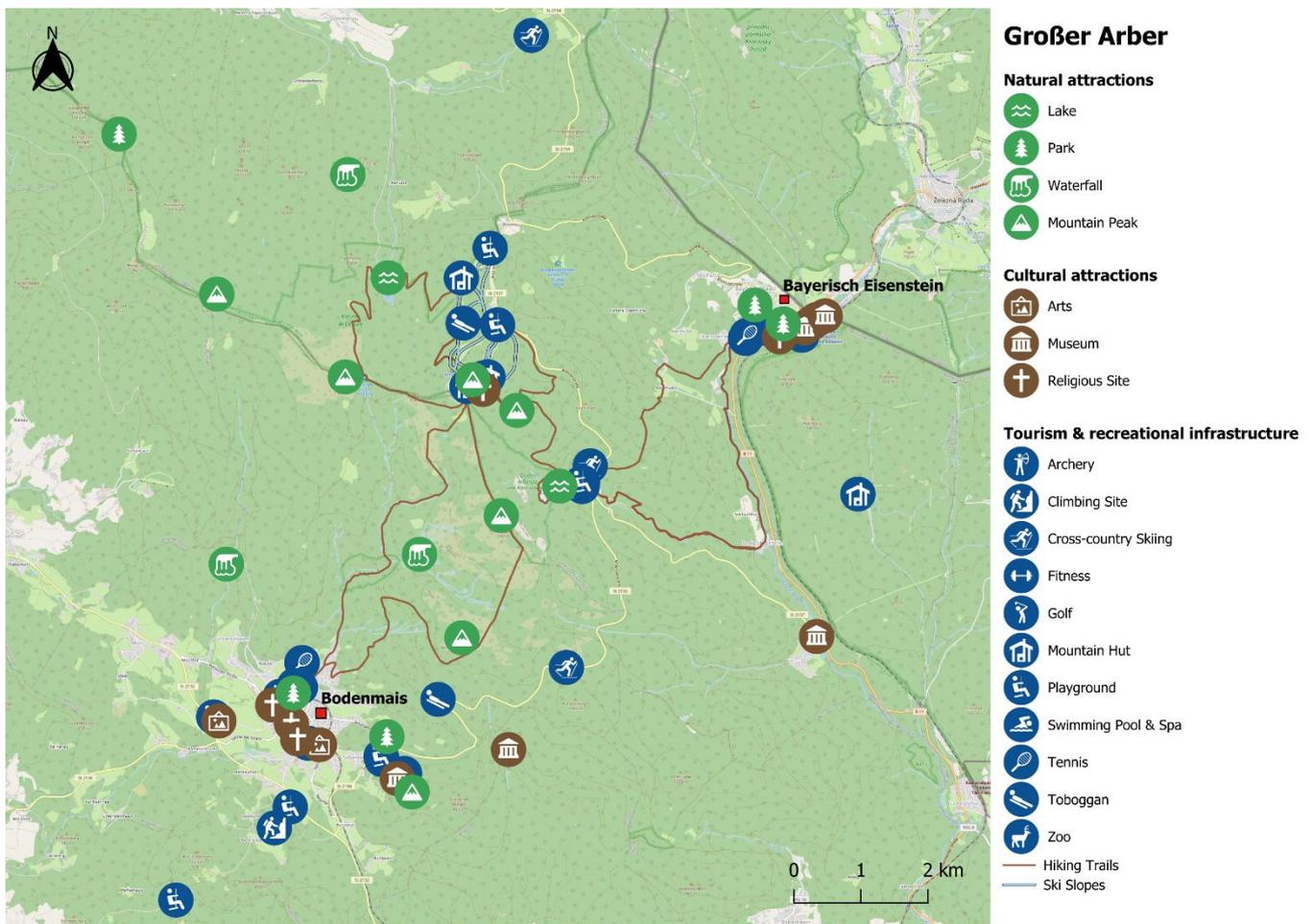


Figure 59: Overview of the German PWA Großer Arber and its attractions (Own elaboration, based on the data provided by the partner)

Its main activities and attractions encompass the following:

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer	Events
Skiing, Snowboarding	Natural & cultural sites	Natural & cultural sites	<b>Winter:</b>
Ski touring	Guided tours	Hiking	Biathlon Cup (January)
Cross-country skiing	Gastronomy	Train running	Ski World Cup (February)
Snowshoe hiking	Wellness areas	Mountain biking	Cross-Country Cups (February & March)
Winter hiking	Indoor swimming pool	E-Biking	<b>Summer:</b>
Sledding	Archery	Road Cycling	Arber Church Fair
	Fitness center	Swimming	Arberland Ultra Trail
		Climbing	Homeland Trails Trophy
		Wellness areas	Arber Cycling Marathon
		Gastronomy	German Summer Biathlon Championships
		Horseback riding	Bodenmais folk festival
		Fishing	
		Kneipp	
		Minigolf	
		Archery	
		Guided tours	
		Adventure playground	
		Lake	
		Water park/swimming pools	
		Motorcycling	

Table 14: Overview of the activities of Großer Arber, divided into snow-specific, non-snow specific and summer activities.

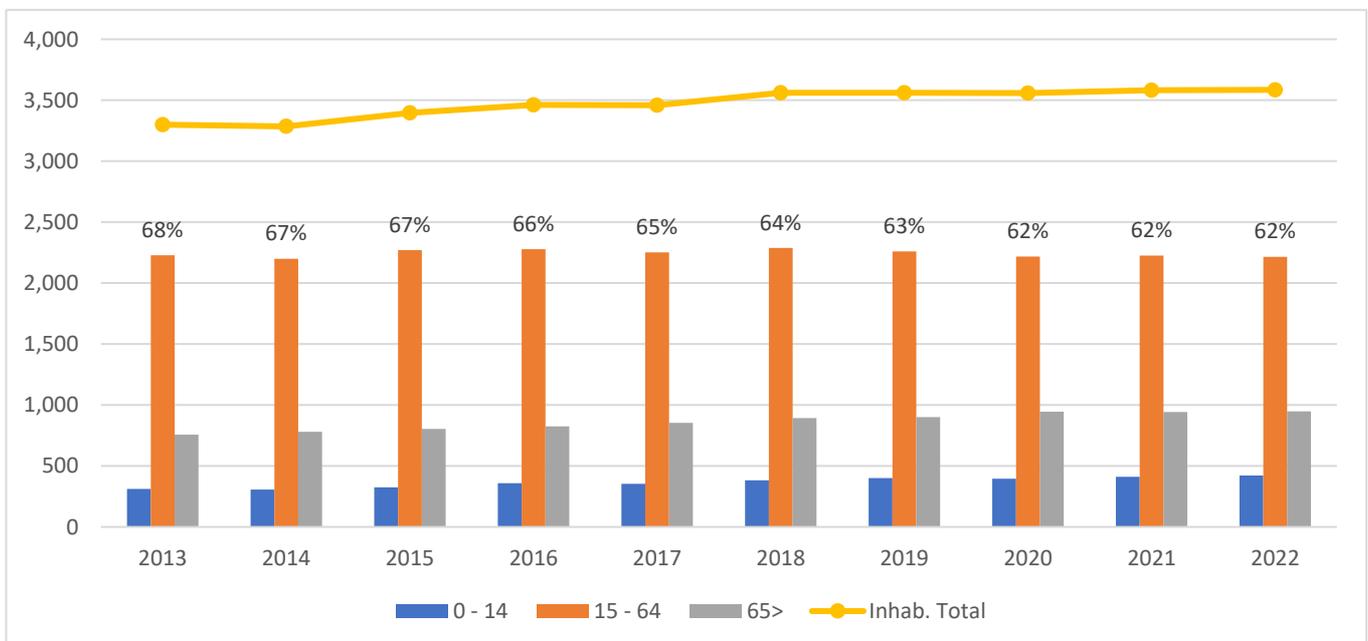


Figure 60: Development of the population and the different age groups of Bodenmais from 2013 to 2022. The data call-out represents the share of the potential working population (age 15 to 64) in relation to the overall inhabitants (Own elaboration, based on data from Statistics Bavaria, 2023a).

Throughout the last 10 years, the population of Bodenmais has seen a slight increase of 9%. The share of the population within the “working age” (from 15 to 64 years) decreased from 68% in 2013 to 62% in 2022. This decrease has been partitioned between the younger age group (from 0 to 14 years) with an increase from 9% (2013) to 12% (2022) and the older age group (>65), which increased from 23% (2013) to 26% (2022) (Statistics Bavaria, 2023a). Considering the average household size of villages with less than 10,000 inhabitants of Bavaria, which is 2.23 persons per household (Statistics Bavaria, 2023b), the number of households in Bodenmais of the year 2022 can be approximated by 1,608. In 2022, the number of 2<sup>nd</sup> homes amounted to 256.

## 9.1 TI – Tourism demand

### 9.1.1 Yearly arrivals & overnight stays

The yearly number of arrivals and overnight stays between the years 2013 and 2022 saw an undulating development, with 2013 registering the highest number of overnight stays (739,736 overnights). 2013 was also the year with the highest average length of stay (5.3 days). Except for the Covid-influenced years of 2020 and 2021, whose data has to be treated with care, the average length of stay saw a gradual decline to its lowest value of 4.5 days in 2022.

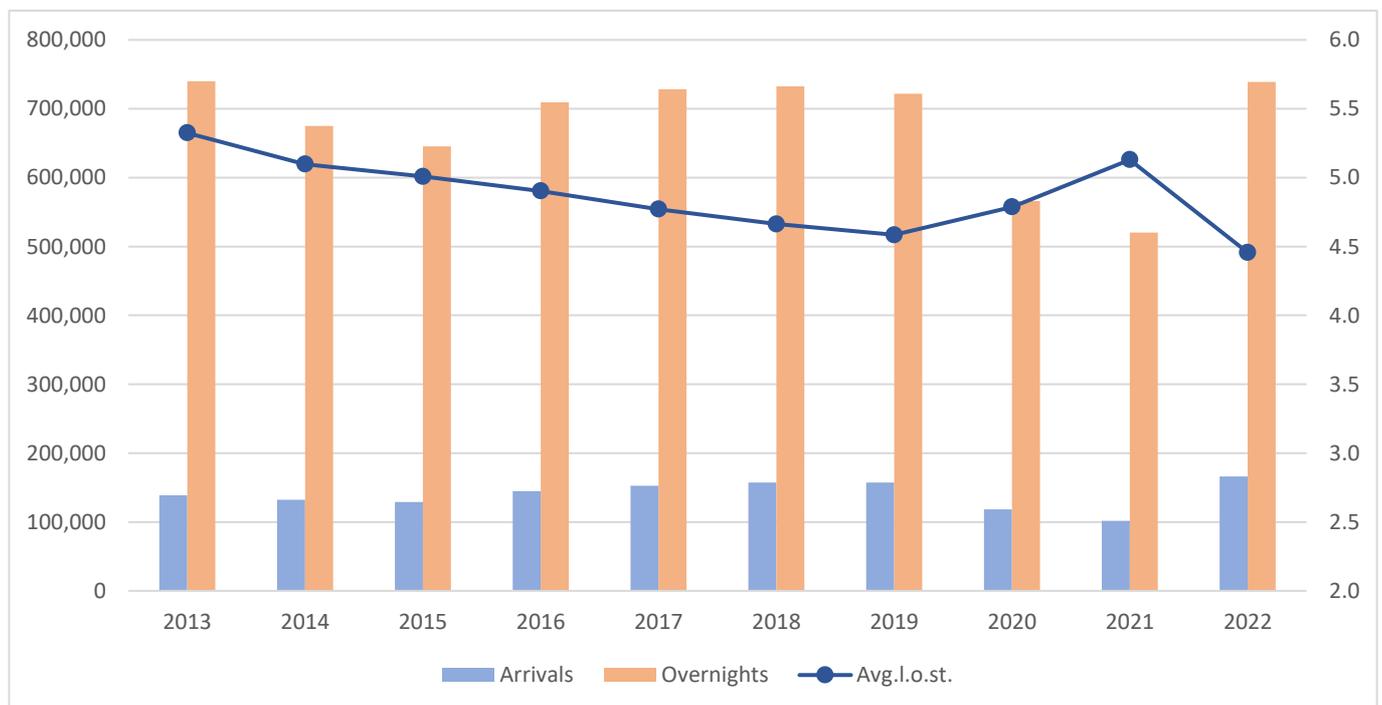


Figure 61: Year arrivals, overnight stays and average length of stay from 2013 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

## Alpine Space

The year with the second highest number of overnights is the year of 2022 amounting to 739,154, which represents a -0.1% decrease in respect to 2013, while in comparison to 2019, the last “normal” year before the pandemic, the overnights of 2022 exhibit a +2.4% increase. The above-mentioned decrease of the average length of stay between 2013 and 2022 is accentuated by the fact that between 2013 and 2022 the overnights diminished by -0.1%, while the arrivals increased by 19.4% (from 138,941 arrivals in 2013 to 165,865 arrivals in 2022). Therefore, the overall length of the guests’ stay within the PWA has been diminishing for the past 10 years, although this reflects an international trend and a yearly average of 4.5 days is still within the acceptable threshold of mountain tourism destinations.

A comparison of the monthly overnights between the years 2013 (highest number of overnights), 2019 (last year before the Covid-pandemic) and 2022 (first year of full recovery of the tourism flows after the Covid-pandemic), results in the following overview:

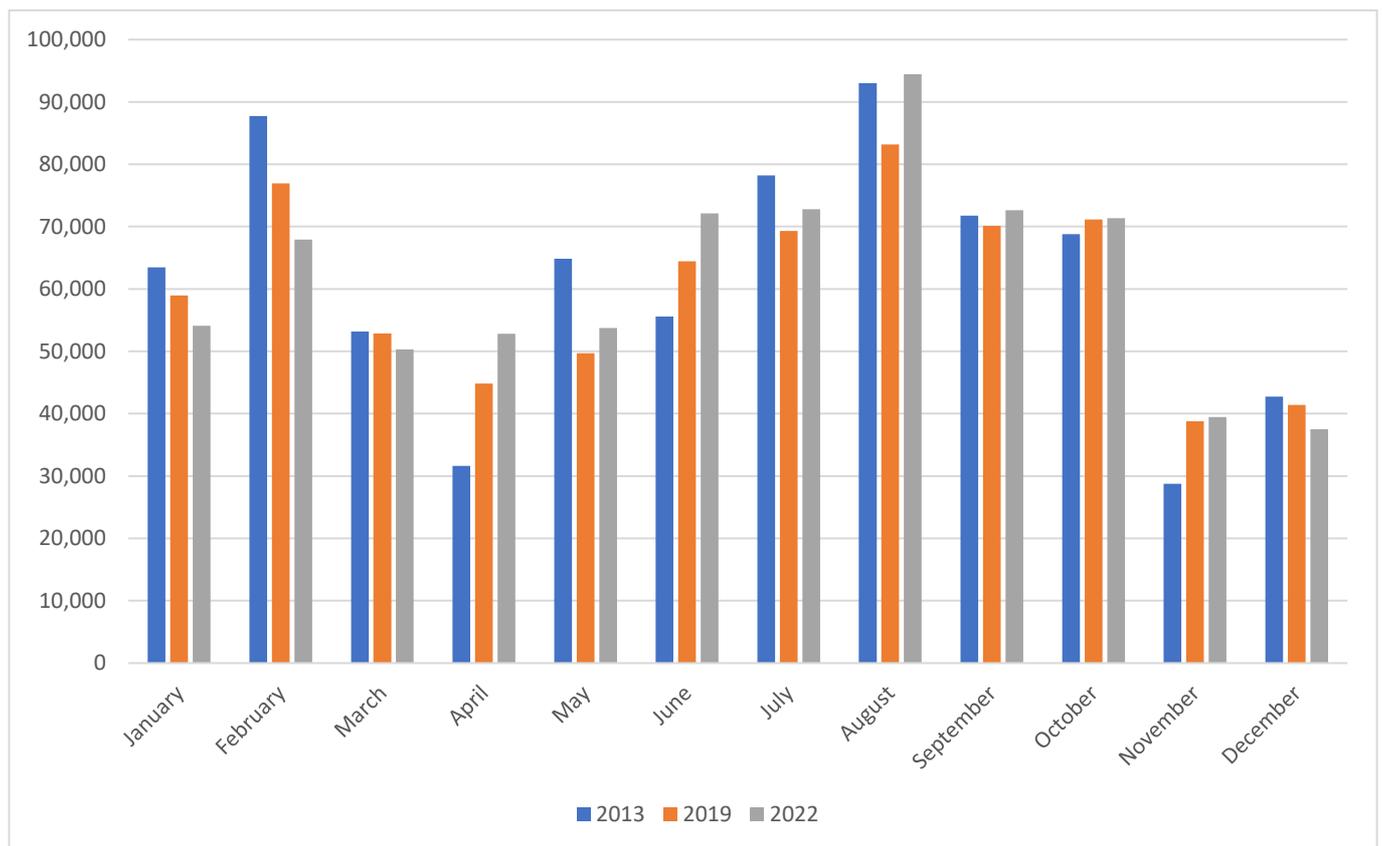


Figure 62: Comparison of the monthly overnights between the years 2013, 2019 and 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a)

### 9.1.2 Arrivals & overnight stays: Winter & summer season

The division between arrivals & overnights between the winter (November-April) and summer (May-October) seasons can generate a deeper understanding regarding the seasonality of the tourism destination. The tourism flows of the Großer Arber are distributed between these seasons in the following way:

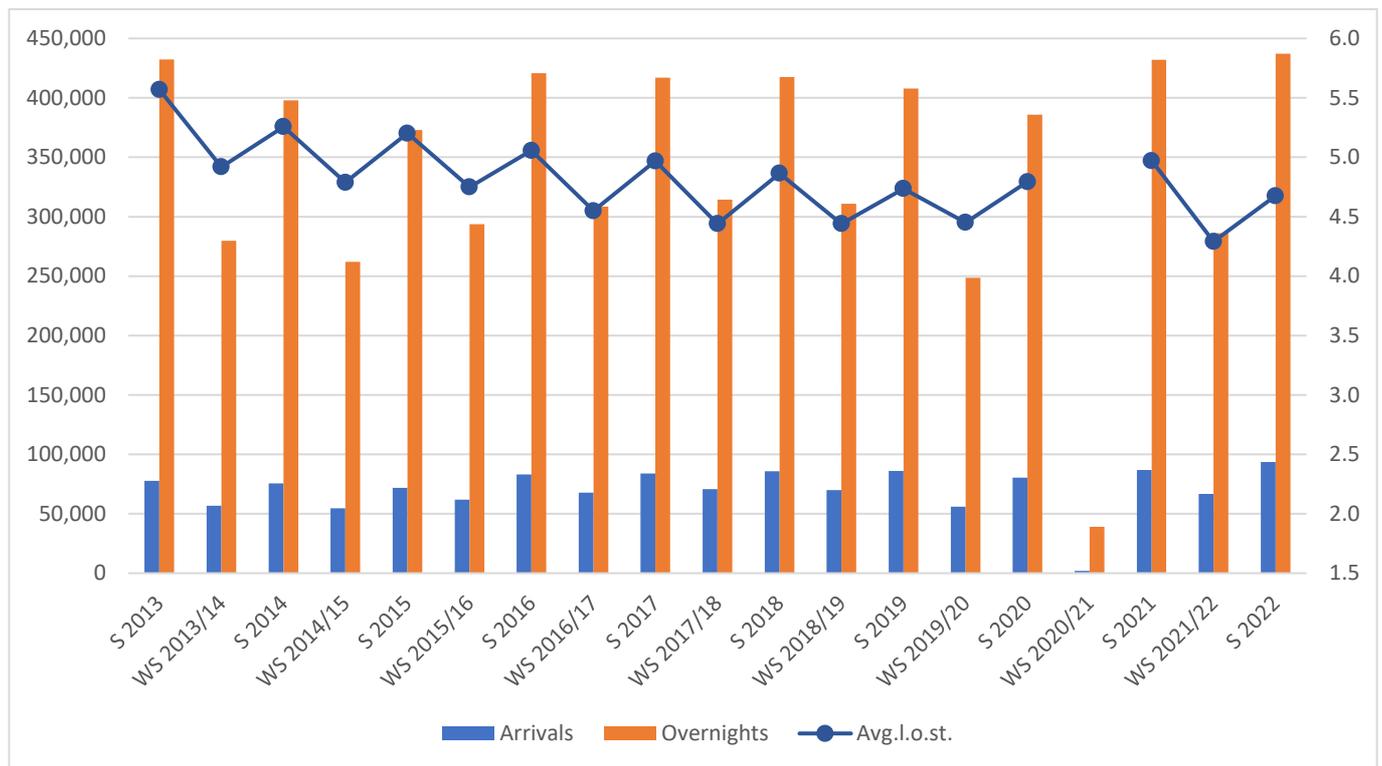


Figure 63: Arrivals, overnight stays and average length of stay divided between winter & summer seasons from 2013 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a)

The distribution of arrivals & overnights of the Großer Arber shows that its summer season is slightly stronger than the winter season. The average distribution of overnights between winter and summer starting with the summer season 2013<sup>7</sup> and 2022 (excluding 2020) amounts to 41.4% in winter and 58.6% in summer. Partially also due to minor residual Covid-effects, the overnights distribution of the last available winter season 2021/22, saw the lowest winter season distribution of 39.6% of the overnights in comparison to the summer season 2022 (60.4% of the overnights). The average length of stay is lower in winter than in summer (between 2013 and 2022: 4.61 days in winter, 5.01 days in summer).

<sup>7</sup> Due to the absence of the arrival & overnights data for November and December 2012, the starting season is the summer season 2013.

Comparing 2013 to 2022, both a slight increase in the share of winter and summer tourism flows can be identified<sup>8</sup>. The comparison of the overnights of the summer season 2013 to 2022 yielded an increase of +1.1% (437,048 overnights in the summer season 2022), while the same comparison in respect to the winter seasons 2013/14 and 2021/22 saw an increase of +2.3% (286,190 overnights in the winter season 2021/22). The same comparison of the WS 2021/22 and SS 2022 to the WS 2018/19 and SS 2019 reveals a decline of -8% for the winter season and an increase of 7.1% of the summer season.

### 9.1.3 Domestic & foreign guests

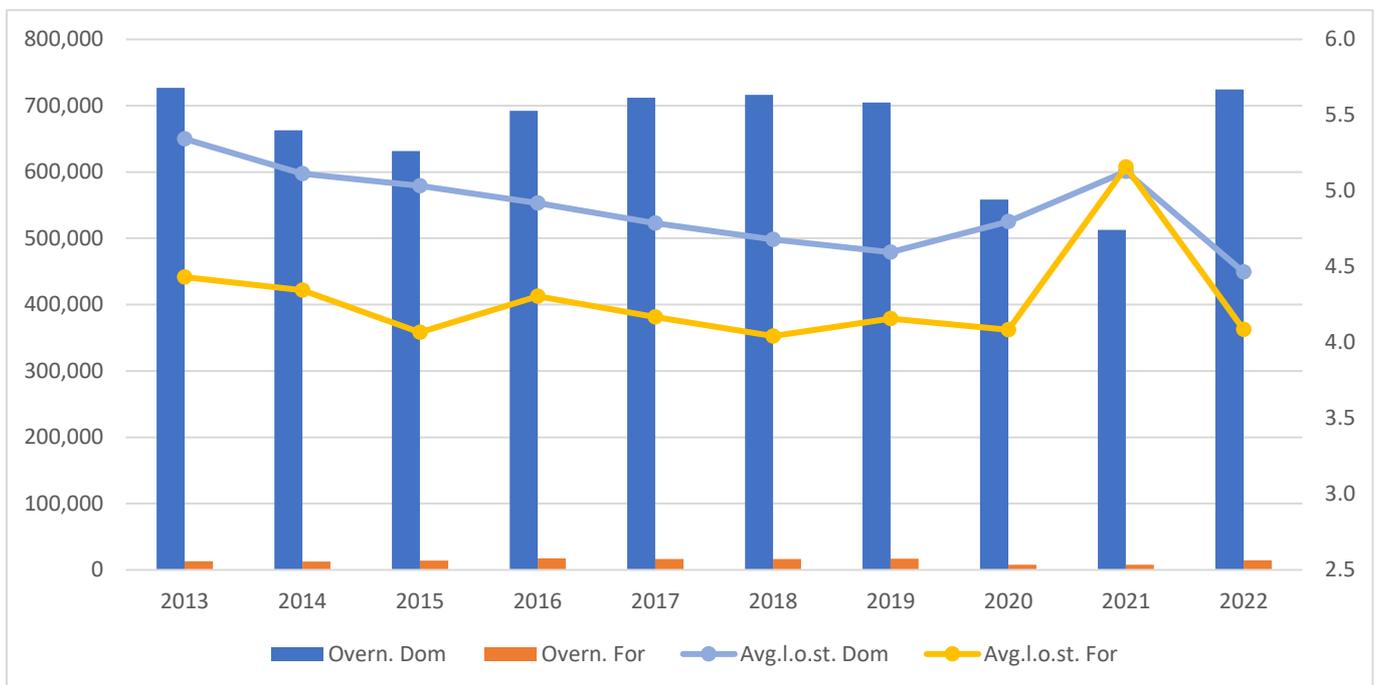


Figure 64: Overnight stays divided between domestic & foreign guests (Own elaboration, based on data from Statistics Bavaria, 2023a)

Based on the overnights data from the year 2013 to 2022 it becomes apparent, that the Großer Arber is a tourism destination, whose arrivals & overnights are almost entirely connected to the domestic market. The average share from 2013 to 2022 between domestic and foreign guests is 97.9% domestic and 2.1% foreign<sup>9</sup>, shares which in 2022 have slightly increased towards domestic guests (98% domestic, 2% foreign guests). This prevalence of the domestic market can possibly have contributed to partially reduce the sharp

<sup>8</sup> Although the overall overnights of 2013 are higher, starting the comparison of the seasons with the summer season 2013 omits the months of January, February, March, and April 2013, of which January and February exhibited much higher overnights than the 2022 months.

<sup>9</sup> For the calculation of the average, the share of the year 2020 and 2021 have been omitted.

decline of tourism flows in the years 2020 and 2021, during which the Covid-pandemic negatively influenced most of all foreign tourism flows due to international travel restrictions.

Figure 64 includes the representation of the average lengths of stay from the years 2013 to 2022 divided between domestic and foreign guests. It is noticeable that the average lengths of stay of the foreign tourists is lower than that of the domestic tourists in all the represented years. In 2022 the foreign tourists stayed 4.1 days on average in the destination, while the domestic tourists 4.5 days. Due to longer travel times to the destination, foreign tourists generally tend to stay slightly longer than their domestic counterparts. The data might indicate that, although no data regarding the differentiation between the foreign source markets were available (and also not very meaningful, since the foreign tourism flows represent only 2% of the overnight stays), the main foreign source markets are possibly in close proximity to the destination, which might be the Czech Republic. Furthermore, an average length of stay of 4.1 also excludes the possibility that foreign tourists use the destination predominantly for brief stopovers.

While domestic overnights saw a slight decrease of -0.3% in 2022 compared to 2013, the foreign overnights registered a +12.7% increase. Comparing 2022 to 2019 the landscape shifts towards an increase of 2.8% of the domestic and a decrease of -13.4% of foreign overnights.

## 9.2 T2 – Tourism accommodation

### 9.2.1 Accommodation structures & bed places

Großer Arber features an accommodation sector, which in 2022 comprised a total of 276 structures and 5,133 bed places. Hereinafter the number of beds places for the years 2020, 2021 and 2022.

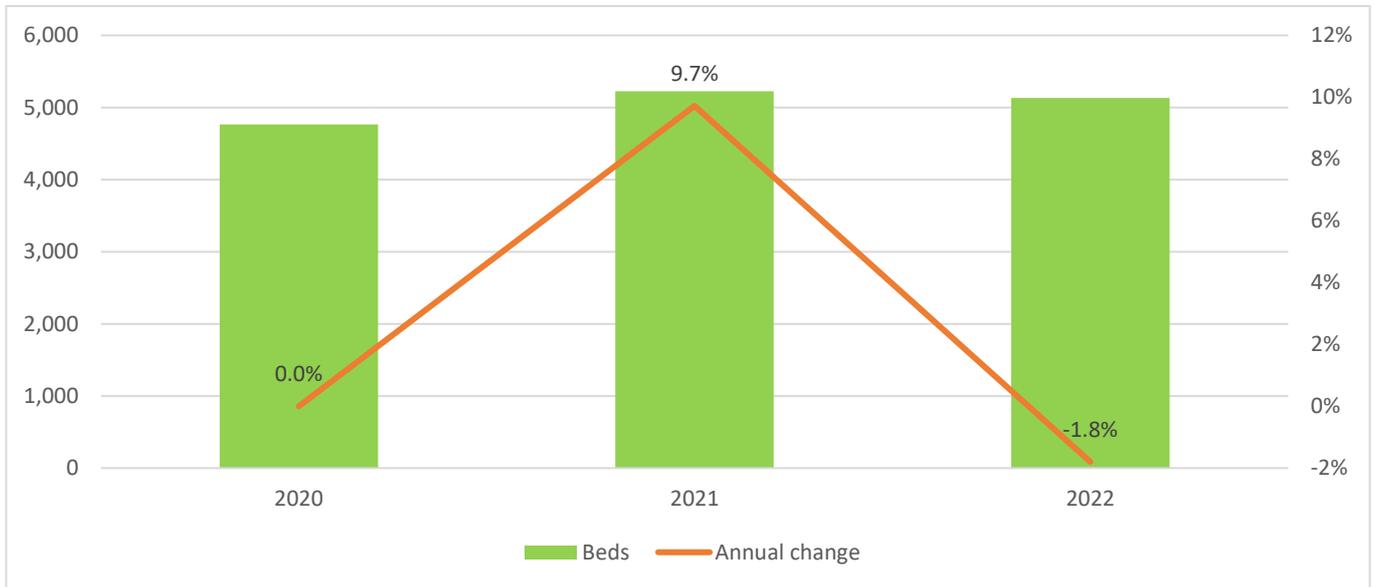


Figure 65: Number of beds from 2020 to 2022, and the annual change (Own elaboration, based on data from Statistics Bavaria, 2023a).

The number of bed places in Großer Arber has seen an increase of 9.7% from 2020 to 2021 and a decrease of -1.8% from 2021 to 2022. Its accommodation sector includes 3-4 Star Hotels, Residence/Pension/B&B, Apartments, Camping and Agritourisms, although specific accommodation types seem to dominate in terms of the overall bed places.

2022	Number of structures	Number of beds	Avg. beds x structure	Share of overall beds
3-4 Star Hotels	26	2,229	86	43.4%
Residence/Pension/B&B	44	759	17	14.8%
Apartments	201	1,780	9	34.7%
Camping	3	343	114	6.7%
Agritourism	2	22	11	0.4%
<b>Total</b>	<b>276</b>	<b>5,133</b>		<b>100.0%</b>

Table 15: Number of structures and beds per accommodation type in 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a)

With 26 structures and 2,229 bed places, the most prominent accommodation type in Großer Arber are the 3-4 Star hotels, with a share of 43.4% of the overall bed places, followed by Apartments, with 34.7% of the overall beds. The average beds per structure follow a classic pattern (campings usually have the highest number of “beds” due to the bed recording modality, which is influenced by their large infrastructure), especially regarding hotels. Hotels of the higher categories typically feature a larger infrastructure and ancillary amenities, which can contribute also to extend the average length of stay of guests, due to the proposal of additional activities. Although having the second highest number of beds, the apartments have the lowest average beds per structure (9 beds).

Due to the absence of the accommodation data prior to 2020, an overall trend of the evolution of Großer Arber’s accommodation sector is difficult to identify.

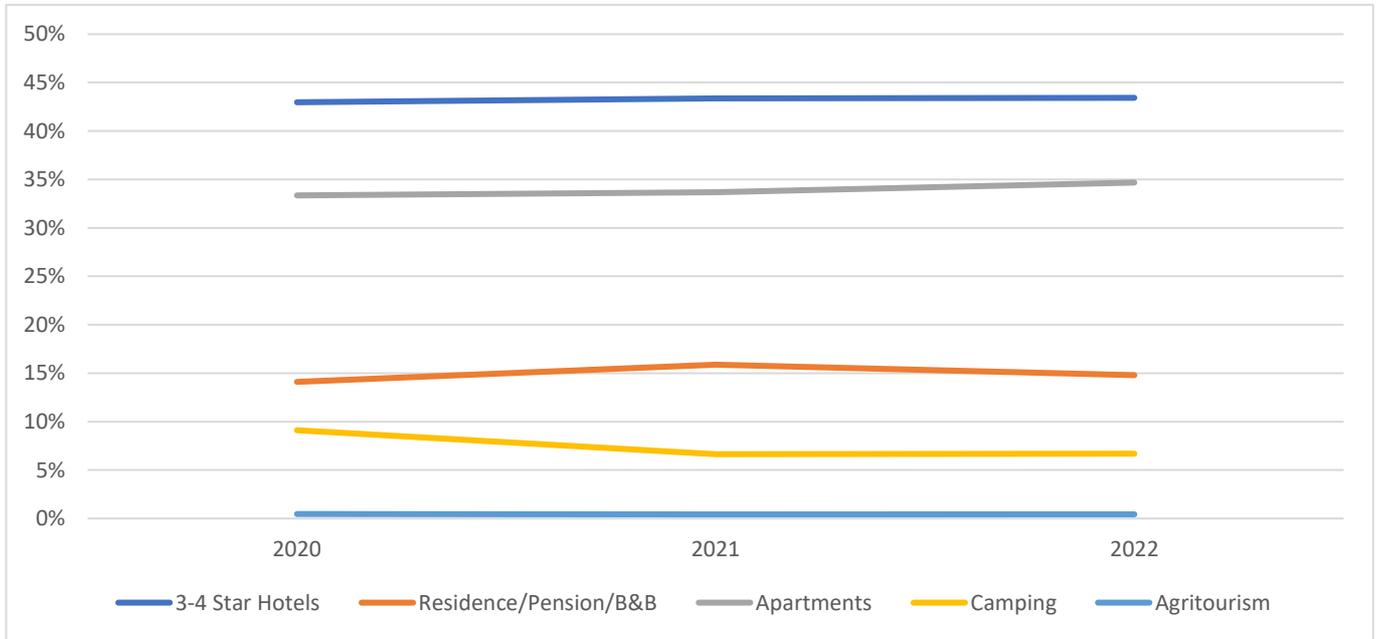


Figure 66: Evolution of the percentage of beds per accommodation type in relation to the overall beds in Großer Arber from 2020 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

In the past 3 years, the percentage distribution of the bed places of the different accommodation types in relation of the overall number of beds, was relatively stable. The share of the 3-4 Star Hotels remained at 43% although growing from 2,047 (year 2020) to 2,229 (year 2022). While the share of camping “beds” decreased from 9% to 7%, the share of apartment beds grew from 33% (1,589 beds in 2020) to 35% (1,780 in 2022) by 191 bed places.

### 9.2.2 Gross bed availability & occupancy

Multiplying the available beds of Großer Arber (5,133 in 2022) with the days of the year (365) yield the yearly gross bed availability, which amounts to 1,873,545 beds. Unfortunately, this indicator does not consider the actual opening and closing days of the accommodation structures, an information, which cannot be obtained.

**Alpine Space**

To still slightly take into account the different seasonal conditions in relation to the different accommodation types, the beds registered under the category Camping, traditionally closed during the colder periods of the year, have been omitted during the winter season (from November to April) for the calculation of the second indicator (Gross Bed Occupancy - WS - Camping), although the adjustment effect remained solely between the range of +0.9% and +1.5% throughout the months of the winter season.

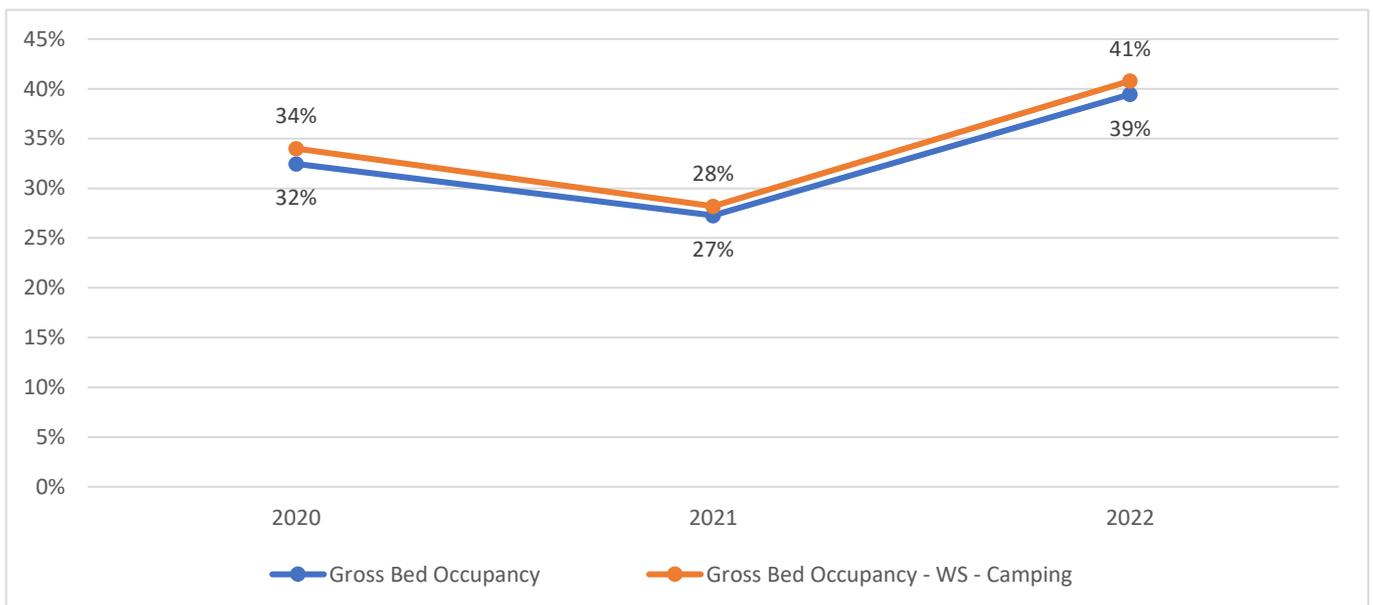


Figure 67: Yearly Gross Bed Occupancy from 2020 to 2022 with and without considering the camping beds in the winter season (Own elaboration, based on data from Statistics Bavaria, 2023a).

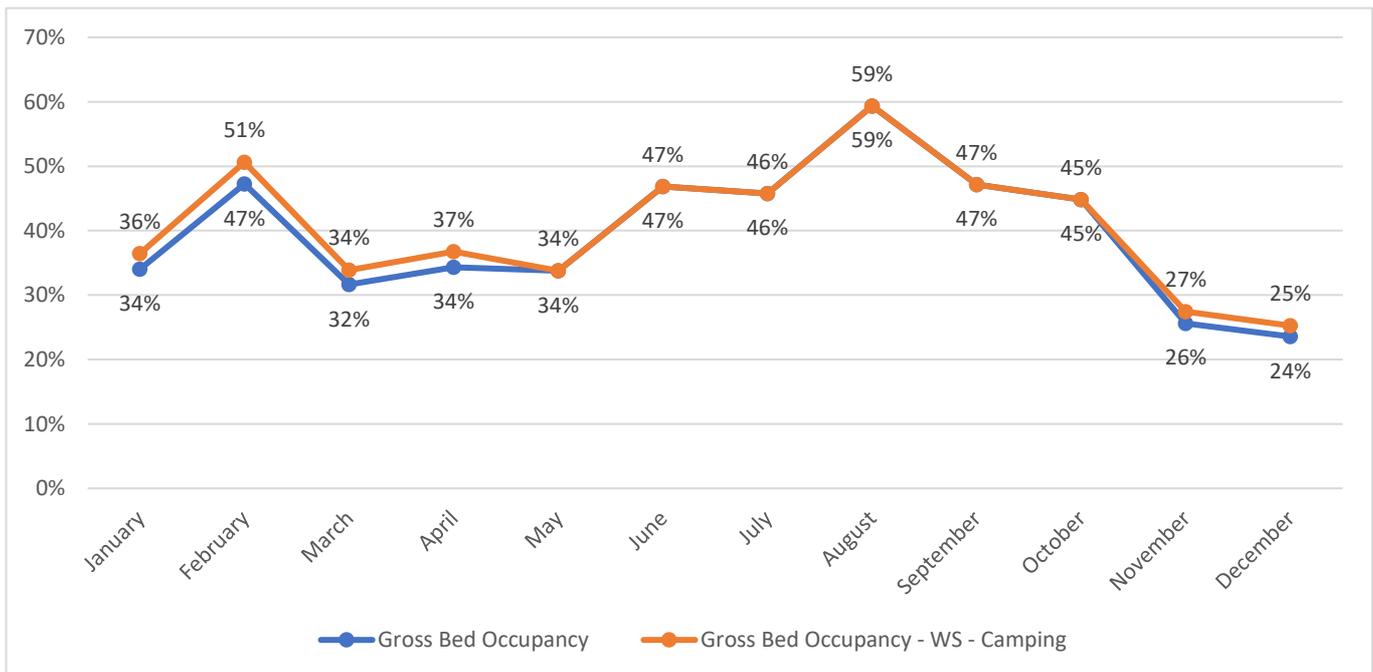


Figure 68: Gross bed occupancy for the year 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

The yearly gross bed occupancy of Großer Arber of 2022 is the highest of the last three years, lying between 39% and 41% (the latter refers to the occupancy not considering camping beds during the winter season). In order to identify where the infrastructural accommodation capabilities are severely underutilized throughout the year, it is necessary to consider the gross bed occupancy on a monthly basis.

The different monthly gross bed occupancies follow the tourism seasonality of the Großer Arber, which is characterized by the traditional bi-seasonality of mountain tourism destinations with low season months (here especially November). Although benefiting from quite strong summer shoulder seasons (especially June, September and October), the bed occupancy of the high season months (July 46% and August 59% in summer, February 51% in winter) still reveals underutilized bed capacity, which needs also to be taken into account during the definition of future development strategies.

### 9.3 Considerations for the future development

- Data regarding arrivals & overnights available.
- Although challenged by climate change, the PWA's overall tourism sector seems not to be overdependent on ski tourism, but the importance of international ski-events can't be underestimated.
- Presence of large national and international events in winter & summer.
- Strong autumn shoulder seasons (Sept-Oct).
- Non-ski dependent activities and seasons can be expanded.
- New non-ski dependent activities can be based on existing activities and resources.
- Currently still very good snow conditions and modern snow-making systems.
- 90 km cross-country skiing infrastructure.
- On average, 98% of the overnights are generated by domestic tourists, while for the remaining 2% of foreign overnights an identification of the different source markets has not been undertaken due to the lack of data, although for the current and further development of the PWA this would still be advisable.
- The average length of stay is slightly higher for domestic tourists (4.5 days) than for foreign tourists (4.1 days), which is unusual. The amount of the latter indicates that foreign tourists do not use the PWA as a stopover-destination, since for that the average length of stay is too high. Although the division between foreign source markets was not available, 4.1 days might indicate, that foreign tourists could be mainly coming from countries, which geographically are closer to the PWA (like the Czech Republic) than some areas of the domestic market, like Northern Germany.

- The 201 apartments have a total of 1,780 beds, which account for 35% of the overall beds. In the absence of an internal organisation of them, these stakeholders can be very difficult to include in participative processes aimed at the PWA development, due to a high fragmentation. It has also to be considered, if and how the apartment owners' market and inform their guests regarding the destination.
- Although benefiting from quite strong summer shoulder seasons (especially June, September, and October), the bed occupancy of the high season months (July 46% and August 59% in summer, February 51% in winter) still reveals underutilized bed capacity, which needs also to be taken into account during the definition of future development strategies.

## 10 PP10 – Métabief (FR)

The Métabief resort (perimeter of the alpine skiing area) is located in the Jura Massif, in eastern France, close to the Swiss border.

It is part of a community of municipalities called Communauté de Communes des Lacs et Montagnes du Haut-Doubs (CCLMHD – 16,000 inhabitants and 420 km<sup>2</sup>), itself part of Pays du Haut-Doubs (63,000 inhabitants and 1,140 km<sup>2</sup>).

The Métabief resort is managed by the Syndicat Mixte du Mont d'Or (SMMO), a local authority that brings together the Department of Doubs and CCLMHD. The mid-mountain alpine ski resort extends from 900m to 1,400m (height difference 500m) and offers year-round activities.

The municipality of Métabief is the main town of the resort and encompasses a large part of the tourism operators and actors who run the resort: sport and leisure activities operators, restaurants, equipment rental companies and accommodation infrastructure.

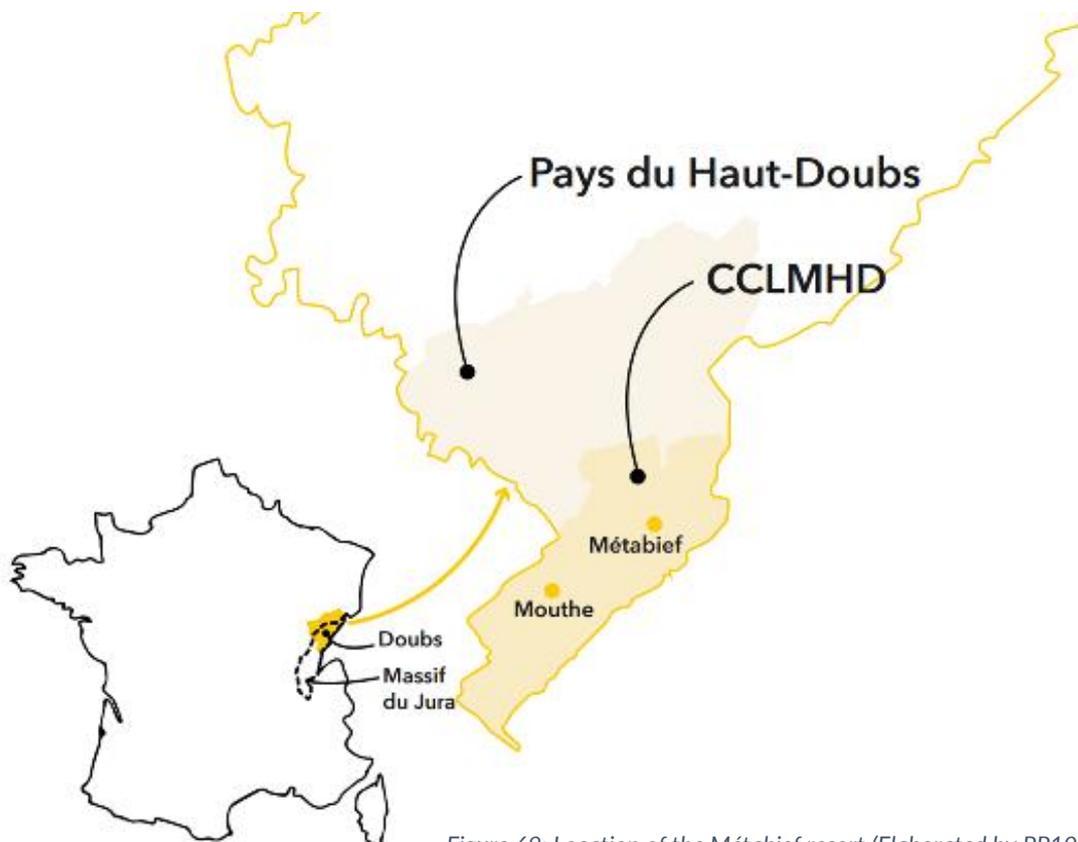
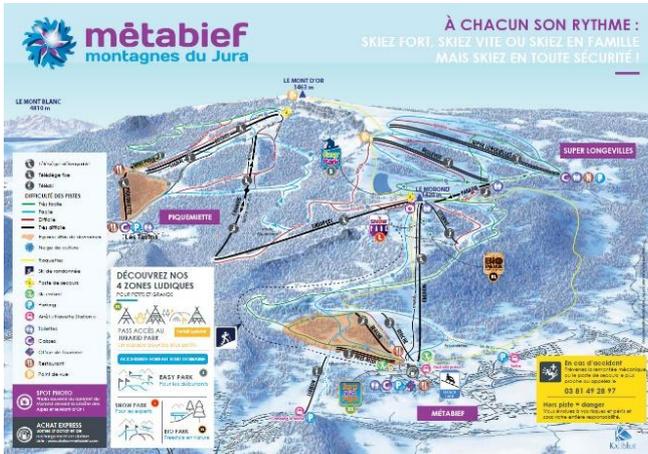


Figure 69: Location of the Métabief resort (Elaborated by PP10)



**Winter configuration:**

- 40 km of downhill ski slopes
- 19 ski lifts: 1 detachable clamp chairlift, 6 fixed clamp chairlifts, 10 ski lifts and 2 carpets;
- 40% of slopes covered with technical snow, resulting in a consumption of 200,000 m<sup>3</sup> of water per year. Presence of a 100,000 m<sup>3</sup> reservoir;
- 1 rail-guided toboggan run (year-round);
- Average "alpine skiing" turnover between €3 and €5 million (€4 million on average per season);
- 200,000 skiers on average per season;
- Operating expenses: €4 million on average. Since 2023, due to the energy crisis, additional costs amounting to + €400,000 have been recorded;
- About 130 full-time equivalent (3 months)

**Summer configuration:**

- 25 km of downhill mountain bike trails;
- 1 rail-guided toboggan run (year-round);
- "Summer" turnover equals approx. €1 million on average, with little variability;
- Transport of hikers by detachable clamp chairlift to discover the Mont d'Or Sensitive Natural Area
- Hiking (10 trails / 120 km), cross-country mountain biking (5 trails / 70 km), Running trails (6 trails / 90 km), developed by CCLMHD;
- Private partners who develop activities:
- Mountain bike learning school
- Paragliding schools
- Leisure village (private): tree climbing, buoys, canopy course, etc.
- About 40 Full time equivalent (5 months)

Table 16: Configuration of the winter and summer tourism offer of Métabief (Elaboration by PP10)

The town features 1,400 permanent residents and 2,500 housing units. The latter are inhabited by:

- 30% of main residences
- 70% second homes

The Métabief town is one of the tourist hubs of the Haut-Doubs.

The map below shows the distribution of tourist beds in the Haut-Doubs region:

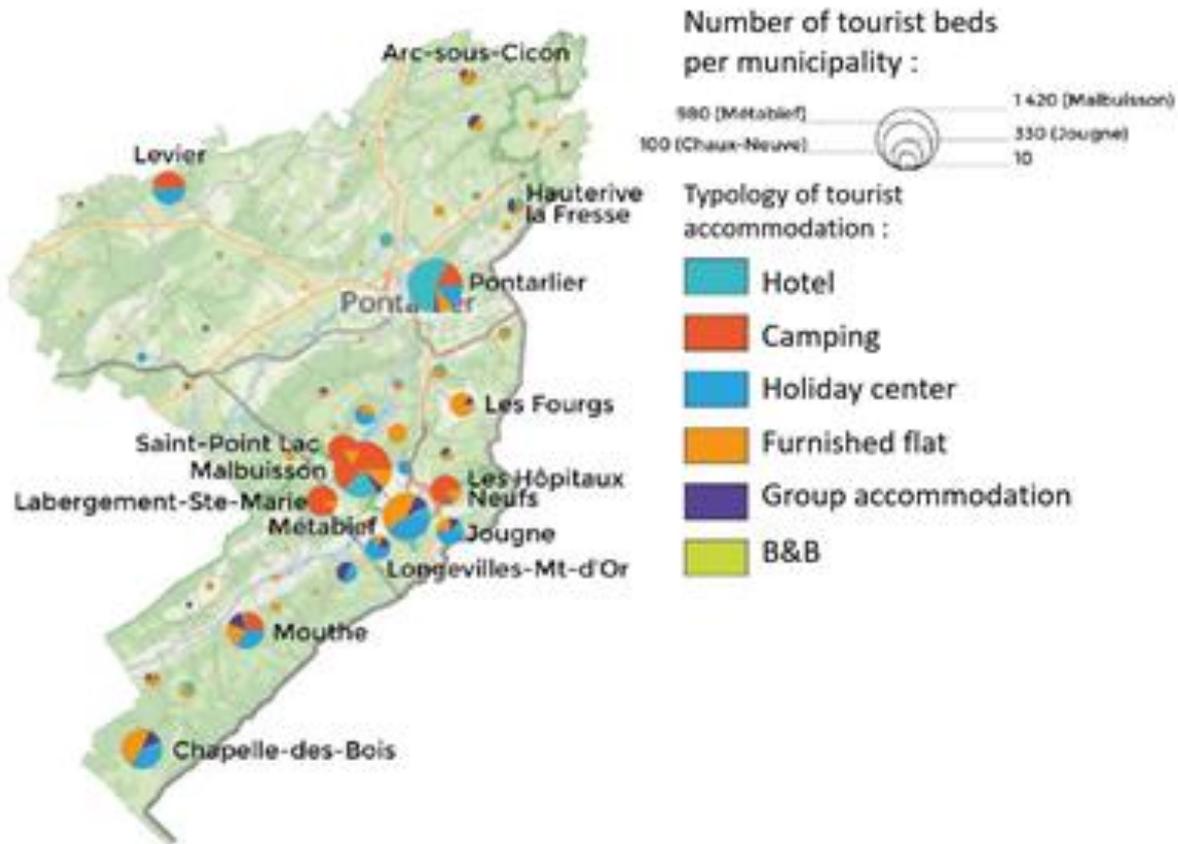


Figure 70: Number & distribution of tourist beds in Haut-Doubs (Elaborated by PP10)

The majority of accommodation infrastructure is located in the Métabief and Lac Saint-Point areas. Pontarlier is also an accommodation hub. Mouthe and Chapelle des Bois also have tourist accommodations.

In total, Haut-Doubs features 5,412 non-commercial (27,060 beds. Beds used by tourists visiting friend and family (VFF) and 2nd homes) and 871 commercial accommodation structures (9,982 beds).

The number of commercial accommodation structures (hostels, camping, holiday centres, bed and breakfast) has been falling steadily since the early 1990s (1989, 1990, 1991 = almost snow-free years), decreasing by -39% over the period 2017-2022. This phenomenon seems to be increasing, especially since the territory welcomes more and more cross-border workers who are looking for year-round housing.

The graph below shows the reversal of the trend towards daily visitors to the detriment of overnight tourism numbers since 1990:

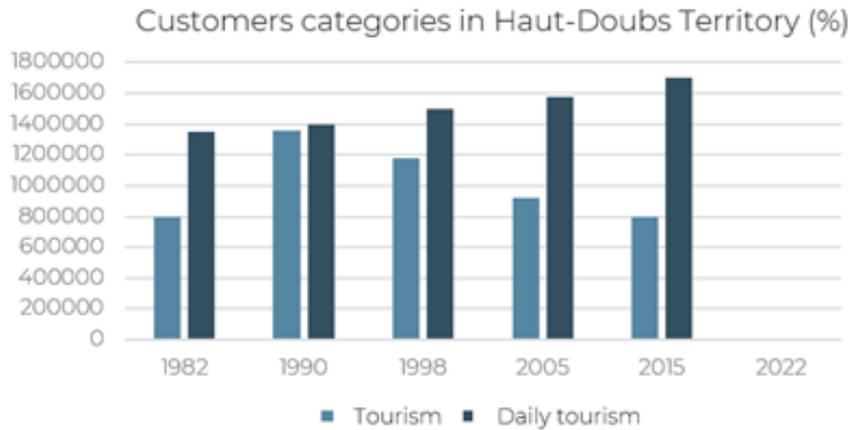


Figure 71: Number of overnight guests (tourism) and daily visitors (daily tourism) in Haut-Doubs since 1982

In 1990, the share of daily tourists was 51%, increasing to 68% in 2015. With the continuing decrease of commercial beds since 2015, it can be assumed that the share of daily tourists increased now to over 70%.

For the Métabief resort, this translates into a mainly local and regional clientele, coming to ski for a day, being very flexible in terms of change of destination and highly depending on satisfactory snow conditions.

## 10.1 Triggering the Métabief transition process

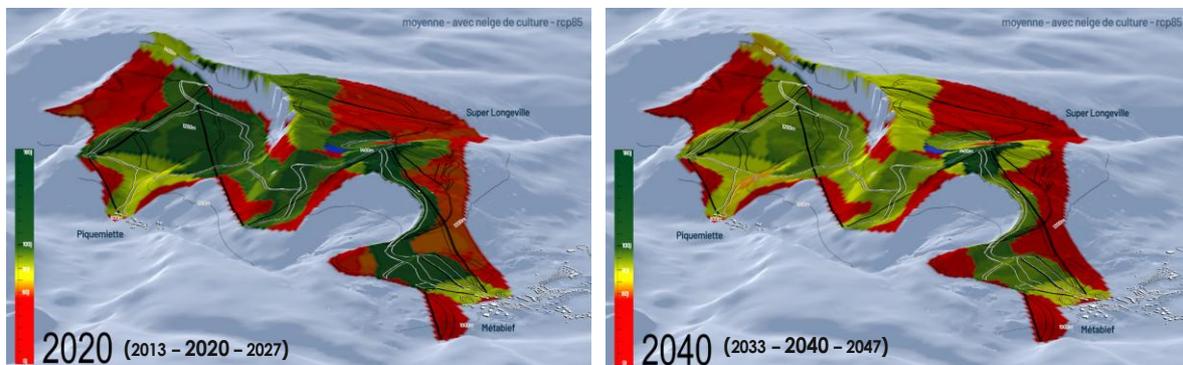
The ski resort's economic model is strongly impacted by the high snow cover variation. Despite the installation of technical snowmaking infrastructure in 2013, turnover remained highly variable, varying between €3 and €5 million per annum, barely covering operating costs connected to energy, maintenance, salaries, etc. An insufficient natural snow cover continues to negatively impact the presence of local and regional daily visitors, due to their higher weather-related flexibility and the potential absence of winter atmosphere. This weather-related tourism vulnerability, in combination with the lack of tourist accommodation, exacerbates Métabief's dependence on natural snow, which can only partially be diminished by the "white strips" of technical snow on the slopes.

The amortisation of the (infrastructural) investments is mostly borne by the SMMO member authorities: The Department of Doubs and the CCLMHD.

In case of winters with insufficient snowfall, the deficit is financed by the Department of Doubs. This public support for the tourism economy of Haut-Doubs is justified by its economic effect on the territory, although in recent years it reached a limit, especially considering that public finances are increasingly strained.

In 2016 the SMMO requested the economic feasibility assessment for the replacement of 4 chairlifts, due to their stability risks verified by experts. The replacement cost was estimated to be €15 million, which begged the question whether the SMMO had at least 20 years of skiing guarantee, necessary to amortize this investment.

• Moyenne



• Q20

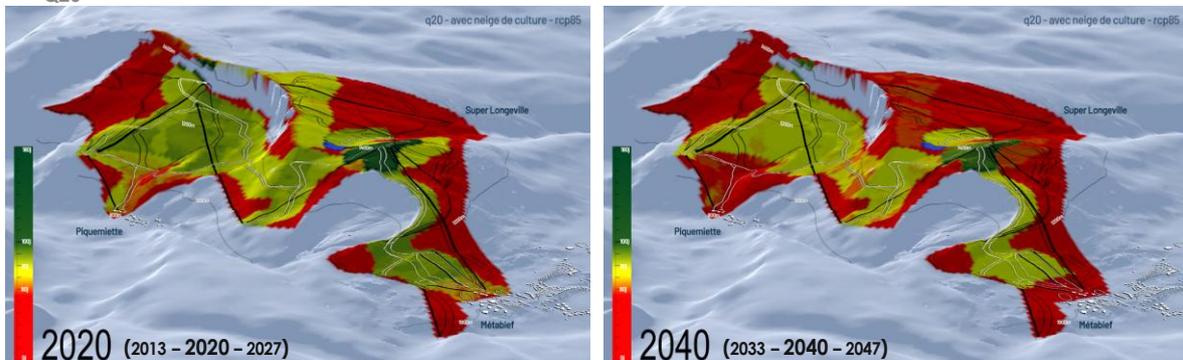


Figure 72: CLIMSNOW projections of snow coverage in 2020 and 2040 in the Haut-Doubs region (Elaborated by PP10).

The answer was provided in 2 stages:

- 2017 - Internal climate projection: From 2030 onwards, areas below 1,100m are very likely not to be able to maintain their skiing operations.
- 2020 - CLIMSNOW study: From 2040 onwards, only areas above 1,000m equipped with technical snowmaking infrastructure will be able to maintain their skiing operations.

From 2030 onwards, the risk of regularly having a turnover of less than €4 million per annum is very high. Based on the current business model, the destination would have been confronted with yearly losses,

resulting in the necessity of a very strong annual economic support from the Department of Doubs, which, however, would have been incompatible with its financial capacities and resources.

In December 2020, the Department of Doubs therefore adopted a transition strategy, consisting of:

- Anticipation of the end of alpine skiing in the Métabief resort in the decade 2030-2040;
- Planning of the maintenance of existing downhill ski infrastructure and refraining from the construction of new downhill ski infrastructure;
- Conversion of the summer toboggan run into a year-round rail-guided toboggan;
- Development and adoption of a cooperative engineering approach, aimed at creating a new tourism & leisure economy model on the scale of Haut-Doubs. The enlarged geographical scope resulted from the assessment, that the geographical perimeter of the Métabief resort is deemed not to be sufficient for solutions, which can (economically) replace alpine skiing operations.

## 10.2 The role of stakeholders

The originality of the Métabief resort's and destination's approach is based on the following considerations and facts:

- To replace the alpine skiing economy, diversification exclusively on the destination's perimeter is not sufficient. It is necessary to build a project on the enlarged scale of the territory of influence;
- One-size-fits-all solutions are not adequate. For example, other (snow-based) outdoor activities are usually presented as alternatives to downhill skiing. But these activities have also a strong impact on the mountain environment and other sectors of the area (for e.g., agriculture and forestry);
- The anticipation of the end of skiing in the destination of interest makes it possible to work for a decade on the development of solutions from the field, fully supported by the stakeholders of the territory through participatory bottom-up approaches and not imposed from above (top-down);
- To help the emergence of these solutions, cooperative engineering is financed by a share of the proceeds from a tax on ski passes (3% of the sale of ski passes) and state aid (Avenir Montagnes Ingénierie).

Stakeholders are involved at 3 levels:

### 10.2.1 First level: SMMO

Ski professionals were the first to understand the effects of climate change on their activities. A management team dedicated to change processes was initiated in 2017 and will continue until the

envisioned end of alpine skiing in Métabief for the decade 2030-2040. In concrete terms, several actions have been carried out:

- Salary re-evaluation of the workforce;
- Strengthening of career paths and facilitating access to vocational training;
- Work on collective values: creation of a film on professions and the mountains, cohesion action, etc.;
- In-house training on climate and environmental issues;
- Involvement of professionals in the steps taken in Mont d'Or Massif and Haut-Doubs region.



Figure 73: Illustration of involvement and training of SMMO in Métabief (Elaborated by PP10).

## 10.2.2 Second level: Mont d'Or Massif

The Métabief destination is located in Mont d'Or Massif. The stakeholders who worked with the SMMO teams saw a lot of potential in the development of winter & summer outdoor activities in this massif. But these activities have strong impacts on the environment and are already generating conflicts with other sectors, such as agriculture and forestry.

The development of these activities was therefore a delicate endeavour. To support new activities, in 2021, SMMO hired a doctoral student to carry out a PhD in Social & environmental psychology in collaboration with the CHROME Laboratory at the University of Nîmes<sup>10</sup>.

This work will continue until the end of 2025 and will be linked to the implementation of a management plan for natural environments led by Department of Doubs (Mont d'Or Sensitive Natural Area).



The objective of the work of the PhD student is to make the stakeholders who work on the massif cooperate through a serious game, to protect the mountain.

The approach carried out on Mont d'Or Massif will enable the stakeholders of Métabief's destination system to create new winter & summer outdoor offers and integrate them into the environment in order to avoid conflicts with other sectors such as agriculture, forestry or hunting.

This experience will also provide tools to support stakeholder projects at the scale of the Haut-Doubs territory.

### 10.2.3 Third level: Haut-Doubs region

As the "after skiing" solutions cannot be found on the perimeter of the resort, SMMO has deployed its cooperative engineering on Haut-Doubs territory.

In 2022, communities of actors bringing together SMMO professionals, socio-professionals from the resort and tourism and leisure actors from Haut-Dobs were set up.

This diagnosis has been staged in a video<sup>11</sup> that brought together stakeholders for triggering new dynamics of change (complementary to that of SMMO teams and Mont d'Or stakeholders).

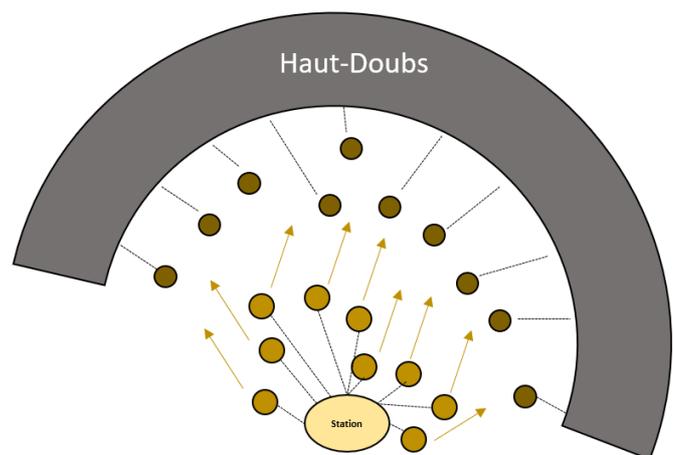


Figure 74: Cooperative engineering scheme (Elaborated by PP10)

<sup>10</sup> <https://chrome.unimes.fr/>

<sup>11</sup> Available in French at [https://www.youtube.com/watch?v=arhQ4gUBaZU&ab\\_channel=MyHautDoubs](https://www.youtube.com/watch?v=arhQ4gUBaZU&ab_channel=MyHautDoubs)

During dedicated workshops, priority work themes were defined by the stakeholders. The two main themes which emerged are the Nordic and the Professions. Further topics were outdoor, culture, heritage, etc.

Currently (end of 2023) the themes "Nordic" and "Business" have been developed most prominently.



Figure 75: Workshops conducted with relevant stakeholders in the Haut-Doubs region

### **Work theme "Nordic":**

The workgroup consists of technicians in charge of the operations of cross-country ski areas and actors involved in sports clubs organising competitions.

After a shared review of climate trends, the group accepted the notion of the end of cross-country skiing during the decade 2030-2040 and identified two areas of necessary intervention:

- The maintenance of cross-country skiing by assuming degraded modes of exploitation, without rushing into diversification, which seems not to be the viable solution for these sites;
- The review of the economic model that binds all the northern sites and risks of quickly collapsing as soon as sites located at lower altitudes are forced to close.

A customer awareness campaign has been set up for the winter of 2023/2024. The Nordic professional federation in the Jura Massif (Jura Nordic Area) is involved in the development of a new economic model.

### **Work theme "Business":**

The workgroup consists of economic professionals from various backgrounds (restaurant managers, site managers, monitoring actors, etc.).

The state of the trades was the subject of a survey of companies and employees in the sector and was staged in the above-mentioned video promoted by the group.

An action plan was validated in 2023 and should see its first achievements in 2024 around the recruitment process and training circuits. The aim is to prepare the sector for current crises and future changes, by putting the appropriate tools in place and acquaint the tourism sector professionals with other sectors of activity.

### 10.3 Methodological principles and precautions

Although the current economic model of Métabief is already struggling, the discontinuation of alpine skiing still poses a great challenge. Resistance was/is observable at two levels:

- At the individual level: confirmation bias caused each individual to sort out new information in favour of data that confirms his/her beliefs. Thus, even if you provide a lot of information, it does not mean that the change could be engaged;
- At the collective level: systems thinking indicates that any organization can be seen as a system, and, as such, is inclined to maintain its homeostasis. Any information that would lead to a change in the system is therefore rejected or abrogated and does not spontaneously cause a change.

The experiences gained within the Métabief destination have been generalized and transferred to the Haut-Doubs region based on methodological principles derived from systems dynamics, sociology of organizations and complex thinking.

#### 10.3.1 Principle 1: Complex systems

The first principle is to consider the organization of the tourism & leisure economy as a complex system (Morin, 2008).

The CYNEFIN framework, developed by Dave Snowden, explains the difference between an approach to complex, complicated and simple problems (Snowden & Boone, 2007).

Complex situations must be approached with humility: no expertise is able to grasp the reality of the situation in its entirety. Data are indications but are not enough to act.

To act, you have to use your intuition; This is the reason why qualitative data are essential and why it is very important to build a shared reality with stakeholders.

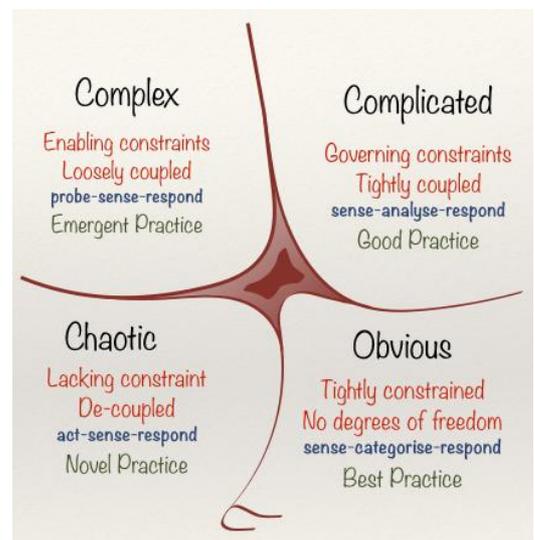


Figure 76: CYNEFIN framework (Snowden & Boone, 2007)

Finally, the mode of action is EXPERIMENTATION. It is therefore a question of extracting solutions from within the system and not of devise actions outside of the system, based solely on quantitative data collected by experts.

### 10.3.2 Principle 2: Transformation of complex systems

The second principle is based on the work of Michel Crozier and Erhard Friedberg and on the principles of transformation of complex systems (Crozier & Friedberg, 1980). They define power as "the level of control over uncertainty". In organizations, four powers co-exist to serve a purpose. These are:

- The power of the LEADER: the one who is legitimized by the organization either because he/she is elected or because he/she has contributed capital;
- The power of the ACTORS: it is the professionals and socio-professional actors who put their skills at the service of the organization;
- The power of RULES: these are the modalities that the organization has agreed upon an adopted in order to be able to operate;
- The power of MARGIN: it is the place in the organization that interferes with the environment and other systems.

In a transformation process the purpose of the organization is called into question by the environment (as snow and favourable temperatures are becoming rarer, it is alpine skiing that is called into question for an organization whose purpose/responsibility/resource it is).

The first temptation of a LEADER is to manage threats without questioning the purpose. By its very nature he/she cannot question this purpose since it is the justification of the organization that has placed him/her in this function. Secondly, if the LEADER sees that the threats are strong, he/she will seek to control the process. The LEADER occupies the MARGIN with the intention of protecting the system, which does not allow the system to transform. To transform, the system must GIVE UP its purpose, which creates a void to be filled. To fill this void, the LEADER must let go, put the current RULES on hold and allow the ACTORS to extract solutions from within the system by identifying a facilitator called the MARGINAL SECANT.

Métabief's experience has made it possible to build communities of actors driven by cooperative engineering, which plays the role of MARGINAL SECANT and is linked to LEADERS (elected officials and business leaders) to give a new direction to the tourism & leisure economy.

Thus, planning is not at the origin of the action but is the result of emergences from the field, subject to the approval of the LEADERS who ensure that the central values of the organization are preserved (without this, the system risks blocking or collapsing, which would lead to chaotic situations).

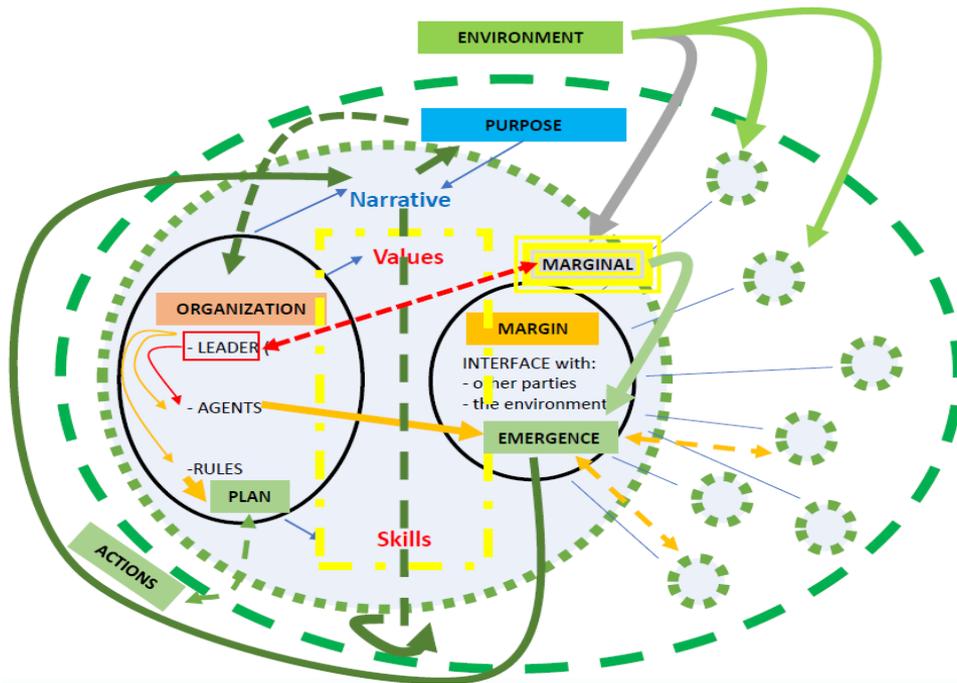


Figure 77: Transformation process of a complex system (Elaborated by PP10)

### 10.3.3 Principle 3: Diffusion pace

The third principle is concerned with the pace at which transformation is diffused into systems.

Two important points were tested in the Métabief destination and Haut-Doubs region.

#### *Relying on innovators to take action*

Everett Rogers' innovation diffusion model shows that change can be triggered with 2.5% of stakeholders (Rogers, 2003). In Métabief, this was represented by the first actions (2019/2020) and in the Haut-Doubs region by the participants of the stakeholder communities (2022/2023).

The main motivator to scale up (moving from innovators to early adopters) is to act quickly. We are used to using the formula: "act fast and think far".

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When a shared inventory is established within a community of actors, ideas emerge at the same time and some can be implemented quickly, without regret.

These “no-regret”, or “quick-win” actions concretise the transformation and can act as a strong motivator for stakeholders.

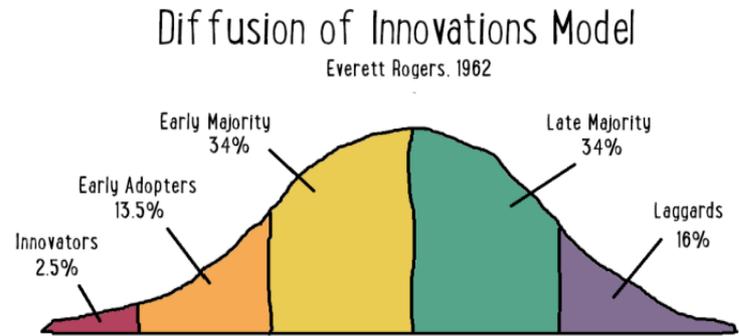


Figure 78: Diffusion of Innovations Model (Rogers, 2003)

### *Propose a value framework to motivate stakeholders*

In order to move from **early adopters** to **early majority**, give consistency to the planning and give the LEADERS the opportunity to set perspectives, it is important to draw on a framework of values that can serve as a trajectory/target. However, this trajectory will remain an adaptable sketch that can be modified over time.

For the tourism & leisure economy of the Haut-Doubs region, a value framework inspired by the symbiotic economy (theory developed by Isabelle Delannoy, (Delannoy & Bourg, 2017)) has been defined.

Among the criteria now used to validate an emerging practice:

- Put **cooperation** at the heart of work and decision-making processes;
- Consider **natural heritage** as commons to be protected and cared for;
- Optimize the **consumption** of space, material and energy;
- Prioritize the provision of goods and services at the **local level**;
- Promote **the rental and sharing** of property;
- Value at a **fair price** and remunerate in a **fair way**;
- Balance public, private, associative and citizen contributions in **economic models**;
- Deploy offers with **high human added value**;
- Preserve and enrich **social diversity**.

### **10.3.4 The central function of the MARGINAL SECANT (or PASSEUR)**

The experience carried out since 2019 has led to the emergence of a new role, that of MARGINAL SECANT, which within the Métabief approach has been called “PASSEUR”. The PASSEUR is an outsider who “dances with the system” (Meadows, 2002) and who makes sure to find other PASSEURS for other systems.

The PASSEUR deploys an engineering of cooperation, mixed with a sense of communication, strategy, a taste for uncertainty, movement, and discomfort.

The PASSEUR is not a particular person: it is someone who will emerge within the system through his/her ability to apprehend uncertainties that the LEADER can no longer manage. He/she will form an alliance with the LEADER: the PASSEUR will lead the transformation with the ACTORS, in a relationship of trust with the LEADER who will continue to DECIDE and carry the NARRATIVE.

The mission of the PASSEUR ends when the organization has learned to cooperate to extracting solutions and the LEADER has validated this new way of working that will transform the organization.

## 10.4 Chronology and continuation of the process

### 2015:

The SMMO emerges from a 9-year period of attempting to revive of alpine skiing (2006-2014) with:

- The construction of the technical snow installation (2013) aimed at guaranteeing 40% of snow cover;
- The professionalization of the support teams (2012-2014) allowing them to conduct maintenance operations in-house.

With the professionalization of the support teams, the ski lift fleet is gradually being upgraded. Nevertheless, 4 chairlifts showed worrying and inexplicable instabilities. It was decided to replace them with 2 modern chairlifts. A replacement programme was approved in March 2015 for €15 million

### 2016:

French law requires that infrastructural developments need to be justified, and climate is a criterion to be included in the feasibility study. In addition, the resort's economic model is questioned: "Will there be at least 20 years of ski guarantee, which is necessary to amortize the €15 million investment in the ski lifts?"

### 2017:

SMMO studies past meteorological data and climate model projections available at the time on the DRIAS-Climate web portal. This work brings together the field teams and a climate scenario is developed at the end of 2017: the risk of not being able to operate the new chairlifts 1 out of 2 winters is considered as high. The economic feasibility of the project is questioned, and alternative solutions are being considered.

**2018:**

SMMO adopts a new method for analysing the ski lifts' infrastructure. This technique uses micro-seismic waves. The analyses reveal that the stability defects are connected to an accelerated degradation of the concrete block bases. The project for new chairlifts is abandoned and replaced by a €2 million programme to renovate the concrete blocks. This solution is economically acceptable, but the climate scenario developed internally emphasises that alpine skiing will no longer be viable by 2030-2040 in Métabief. Questions regarding the future development of the destination within this timeframe arise.

**2019:**

The diversification of activities is seen as a partial solution but is considered not to be sufficient for the overall replacement of alpine skiing. Furthermore, SMMO determines that only a few activities are feasible given the environmental sensitivities of the Mont d'Or Massif and the other mountain sectors (agriculture and forestry). Mountain biking, hiking, trail running, and a rail-guided toboggan run will not be sufficient to replace the skiing economy. The approach has to be extended on a wider perimeter, that of the Haut-Doubs territory.

To generate these solutions, SMMO is setting up a cooperative engineering mission financed through 3% out of the alpine ski pass revenues for a period of 6 years (2019-2024)

**2020:**

While the programme to renovate the ski lifts is launched, although slowed down by the Covid-19 pandemic, the engineering mission produces its first actions in cooperation with private operators: Ultra Trail des Montagnes du Jura, Jurassic Vélo Tour, professionalisation of APACH'Evasion, creation of the outdoor sports federation (O'SPORTS). At the same time, the Métabief destination is the first station to experiment with the CLIMSNOW model, which confirms the internally developed climate scenario.

At the end of 2020, the following political decisions are taken: anticipation of the end of alpine skiing by 2030-2040 with a maintenance plan, a rail-guided toboggan run and transitional engineering in the Haut-Doubs territory.

**2021:**

Continuation of transition engineering actions including a mountain bike trail project for CCLMHD, a reflection on tourist shuttles and the touristic revaluation enhancement of an abbey.

End of the "concrete blocks" project and launch of the "rail-guided toboggan run" project.

Launch of the cooperation with the PhD student in social and environmental psychology to anticipate the development of outdoor activities.

Scaling up of the action thanks to the financial support by the French State via the Avenir Montagnes Ingénierie program: at the end of 2021, recruitment of a transition project manager for Haut-Doubs region.

### **2022:**

Finalization of the "rail-guided toboggan run" project and the mapping out of the transition trajectory for the METABIEF station. The next challenge is to support tourism professionals in the evolution of their professions. From 2022 onwards the attention will be focused on the Haut-Doubs region.

Sensitive diagnosis of the actors of the tourism & leisure economy of Haut-Doubs.

Launch of a MASTERPLAN using a systemic approach and the referential framework of the symbiotic economy.

Creation of communities of thematic actors (Nordic and Business) bringing together operators, without the presence of elected officials, for extracting solutions with facilitation methods

### **2023:**

Elaboration of the MASTERPLAN based on the solutions that emerge from the communities of actors, particularly from those of the Nordic and the Business sector. Assessment of the engineering mission carried out by the SMMO (report of the Regional Chamber of Auditors) and the 9-year transition period (2015-2023).

Outlook 2024-2025: the transfer of the mission is to be carried out over the period 2024-2025, to bodies acting at the level of the Haut-Doubs region (Pays du Haut-Doubs and Tourist Office). During this period, the SMMO carries out the mission administratively but no longer acts in the management.

### **2024-2025:**

Future goals:

- Support project leaders included in the MASTERPLAN for the tourism & leisure economy of the Haut-Doubs region;

- Support the renunciations of the Nordic sector which will leave room and release resources for the development of additional outdoor and cultural activities;
- Support the development of outdoor activities by drawing inspiration from the work of the PhD student in social and environmental psychology in order to build new outdoor activities integrated into the environment and respectful of other practices such as agriculture, forestry or hunting;
- Support all professionals of the tourism & leisure sector in the Haut-Doubs region in the construction of mechanisms to facilitate recruitment and training to prepare for future developments;
- Prepare the support of the cooperation engineering missions for the transition by Pays du Haut-Doubs and the Tourist Office.

## 10.5 Lessons learned & considerations for the future development

- To replace the alpine skiing economy, diversification exclusively on the destination's perimeter is oftentimes not sufficient. In such a case, it is necessary to build a project on the enlarged scale of the territory of influence.
- The introduction of alternative activities (snow-related and non-related) is oftentimes not sufficient for an (economic) replacement of alpine skiing. A more profound adaptation/transformation of the overall destination system can therefore be necessary.
- One-size-fits-all solutions are oftentimes not adequate. For example, other (snow-based and non-snow-based) outdoor activities are usually presented as alternatives to alpine skiing. But these activities have also a strong impact on the mountain environment, and might generate conflicts with other sectors of the area (e.g. agriculture and forestry).
- The anticipation of the end of skiing in the destination of interest makes it possible to work for a longer period of time on the development of solutions with the inclusion of the stakeholders of the territory through participatory bottom-up approaches and not imposed from above (top-down).
- A destination's shift of the focus away from alpine skiing, also influences the workforce present within the destination, especially ski professionals. Some of the possible actions, which can be taken regarding this are:
  - Salary re-evaluation of the workforce;
  - Strengthening of career paths and facilitating access to vocational training;
- Solutions have to be also extracted from within the destination system. It is not sufficient to devise actions outside of the system, based solely on quantitative data collected by experts.
- In organizations, four powers co-exist to serve a purpose. These are:

- The power of the LEADER: the one who is legitimized by the organization either because he/she is elected or because he/she has contributed capital;
  - The power of the ACTORS: the professionals and socio-professional actors are the ones who put their skills at the service of the organization;
  - The power of RULES: these are the modalities that the organization has agreed upon an adopted in order to be able to operate;
  - The power of MARGIN: the place in the organization that interferes with the environment and other systems.
- In a transformation process the purpose of the organization is called into question by the environment (as snow and favourable temperatures are becoming rarer, it is alpine skiing that is called into question for an organization whose purpose/responsibility/resource it is).
  - To successfully transform an organization, the LEADER must authorise ACTORS to work in the MARGIN to let solutions “emerge”. The facilitator of this work establishes a relationship of trust with the LEADER. During this process, the RULES are respected at a minimum and must also be adapted to changes (you must be careful that the rules do not prevent change).
  - The transformation can begin with a reduced panel of pioneers, through rapid actions (quick wins); the LEADER celebrates successes, and the facilitator continues to work with the ACTORS so that actions multiply.

## 11 PP11 – Sattel-Hochstuckli (CH)

The altitude of the PWA extends from 779m to 1,480m, the main height difference is 701m. It offers 4 ascent facilities, 6 slopes and 14 slope km.

Sattel-Hochstuckli presents itself as a mainly day-tourism type of destination. Based on data collected by PP11, the accommodation landscape seems to be almost non-existent. Being a small municipality and well-connected to the surrounding area, the possible tourism activities and attractions extend beyond the borders of the municipality. Furthermore, the PWA cooperates with the Ägerital-Sattel Tourismus and the Erlebnisregion Mythen.

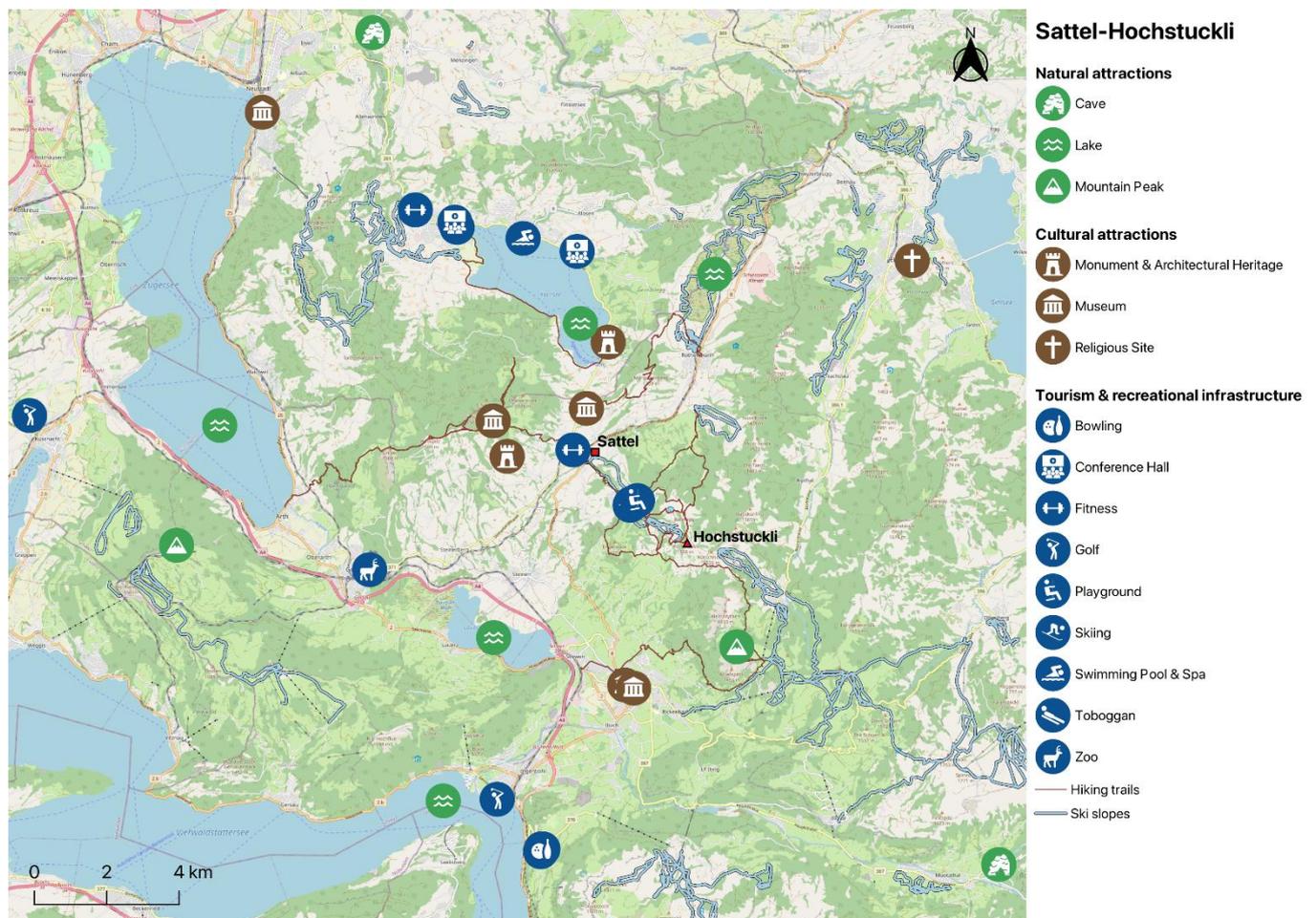


Figure 79: Overview of the Swiss PWA Sattel-Hochstuckli and its attractions (Own elaboration, based on the data provided by the partner)

Its main activities and attractions encompass:

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer
Skiing & snowboarding	Natural & cultural sites	Natural & cultural sites
Ski touring	Gastronomy	Hiking
Snowshoe hiking	Wellness areas	Mountain biking
Winter hiking	Indoor swimming pools	Sailing
Sledding	Indoor bowling	Archaeological/historical park
		Lake

Table 17: Overview of the activities of Sattel and its surrounding area, divided into snow-specific, non-snow specific and summer activities.

The overall population of Sattel is 2,010 inhabitants. Its area encompasses 17.39 km<sup>2</sup>, of which 6.8% settlement and 60.1% agricultural area. The housing stock amounts to 1,069 units<sup>12</sup>. The amount of second homes is 144 units.

## 11.1 T1 – Tourism demand

### 11.1.1 Yearly total and average daily passengers

Being prevalently a day-tourism destination, the tourism flows of Sattel-Hochstuckli can be represented by data of the cable car utilization, the main mean of transport to reach the PWA.

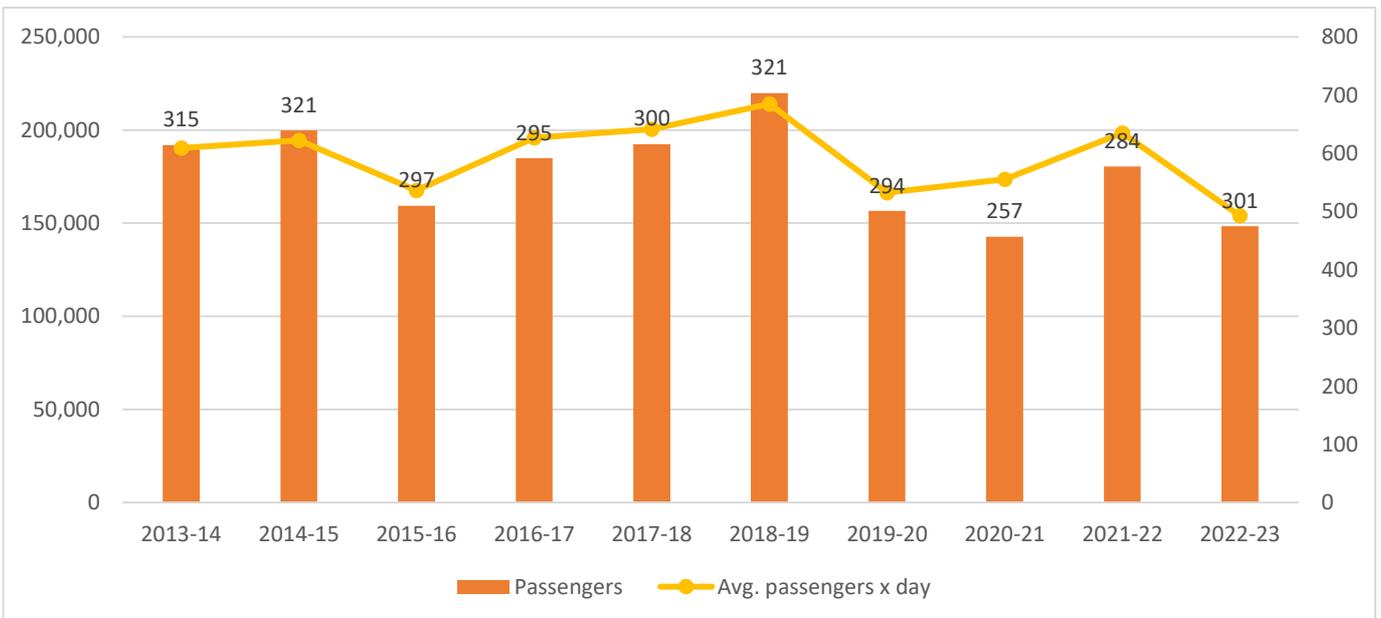


Figure 80: Yearly passengers at the valley station of the revolving gondola cableway from the tourism year 2013-14 to 2022-23 (Own elaboration, based on data from the cable car operators). The data callout represents the number of days, for which the data was available

<sup>12</sup> Data retrieved from <https://www.sattel.ch/gemeindeinzahlen>

Data retrieved from the valley station of the revolving gondola cableway Stuckli Rondo can be utilized for approximating the day-tourism flows of the PWA. In general, data is generated from mid-April until the beginning of March. Therefore, the data is divided between tourism years (From November to October of the subsequent year). Between 2013-14 and 2022-23, the tourism year 2018-19 saw the highest number of passengers with 219,837 passengers, while the tourism year 2022-23 saw the second-lowest number of passengers (148,286 passengers). The latter saw also the lowest average passengers per days, which in 2022-23 was 493 passengers. The indicator “average passengers per day” takes into account the number of days for which data was available, which in 2022-23 were 301 days.

### 11.1.2 Monthly passengers

Splitting up the passages of the different tourism years into monthly passages, allows to generate an overview regarding the monthly distribution and seasonality of the daily visitors flows of Sattel-Hochstuckli. Although daily flows were available, it has been decided to combine them into monthly flows, in order to allow for comparisons between the different months of the years. Hereinafter the figure representing the monthly number of passengers of the tourism years 2013-14 (the first available year of

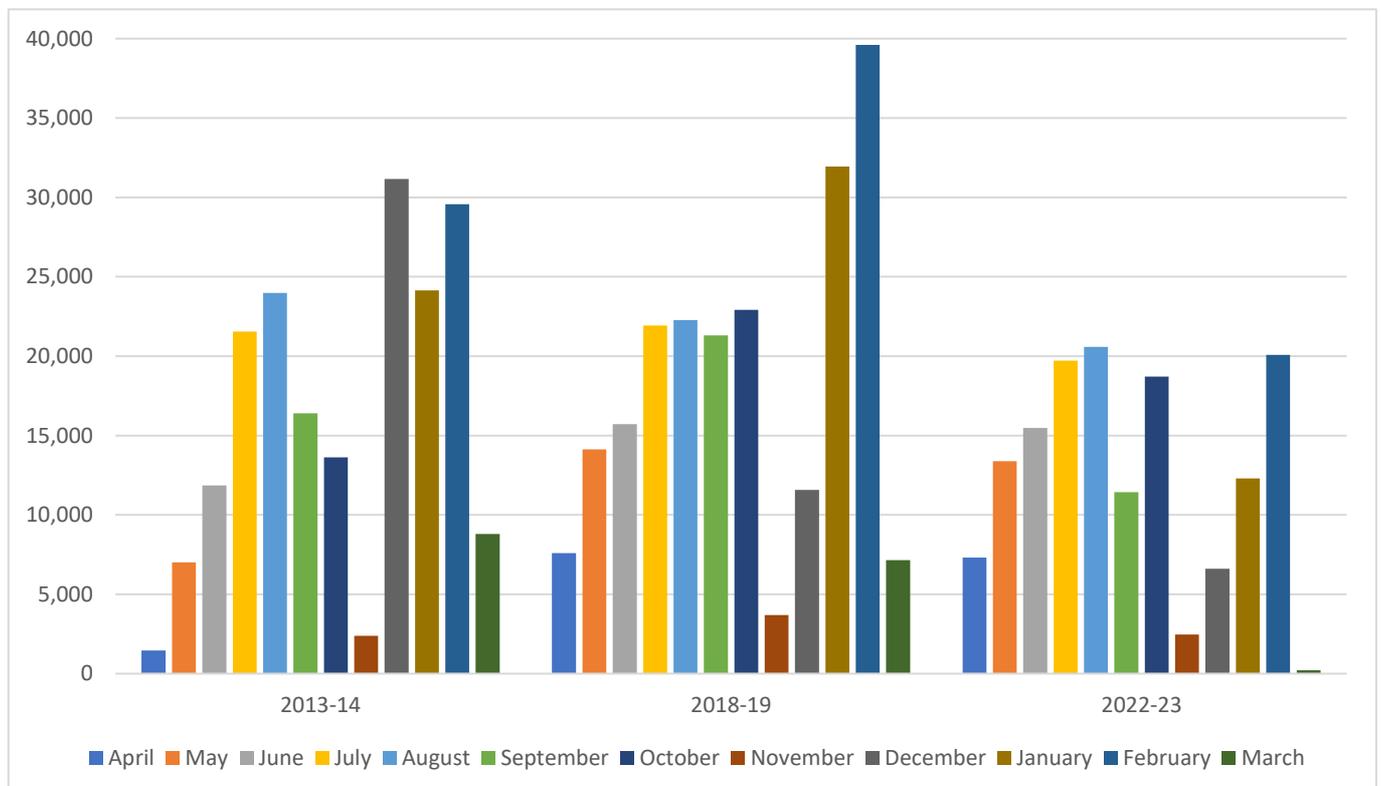


Figure 81: Monthly distribution of passengers of the years 2013-14, 2018-19 and 2022-23 (Own elaboration, based on data from the cable car operators).

data), 2018-19 (the last complete regular year before the Covid-19 pandemic) and 2022-23 (the latest complete tourism year).

Based on the monthly passenger numbers, Sattel-Hochstuckli appears also to have a bi-seasonality, with strong shoulder seasons and closing times from the beginning of March until mid-April as well as mid-November until the beginning of December.

Starting from the year 2013-14, within which 49% of the passages were registered in the summer season (May-October) and 51% in the winter season (from November 2013 to April 2014), the distribution of the passages gradually shifted towards the summer season, which in 2018-19 registered 54% and in 2022-23 67% of the yearly registered passages. Between 2013-14 and 2022-23, during the month of February some of the highest passenger flows were registered (except for 2019-20, highly influenced by the Covid-19 pandemic).

Also in 2022-23, although showing most of the passenger flows in the summer season, 14% of the total flows were registered in February, which with 20,072 passengers represents the month with the second-highest passenger flows, just after the month of August with 20,580 passengers. In comparison to the years 2013-14 and 2018-19, which both have higher flows for the months July and August, especially September 2022-23 saw a noticeably decrease in passenger numbers, registering the lowest flows since 2013-14.

Considering the monthly distribution of the year 2022-23, it becomes apparent, that, next to a weaker winter season due to low passenger numbers, especially in the traditionally strong month of January, also the, although generally increasing, passenger flows of the summer seasons were fewer in 2022-23 than previous years.

The number of passengers of the sum of the four strongest months (July plus August and January plus February), traditionally represent 50% of the overall yearly passengers, indicating a high dependency on these months. Considering the snow conditions, which are an essential element for the attractiveness of the winter months (in this case January and February), the vulnerability of Sattel-Hochstuckli towards the effects of climate change seems to be quite high.

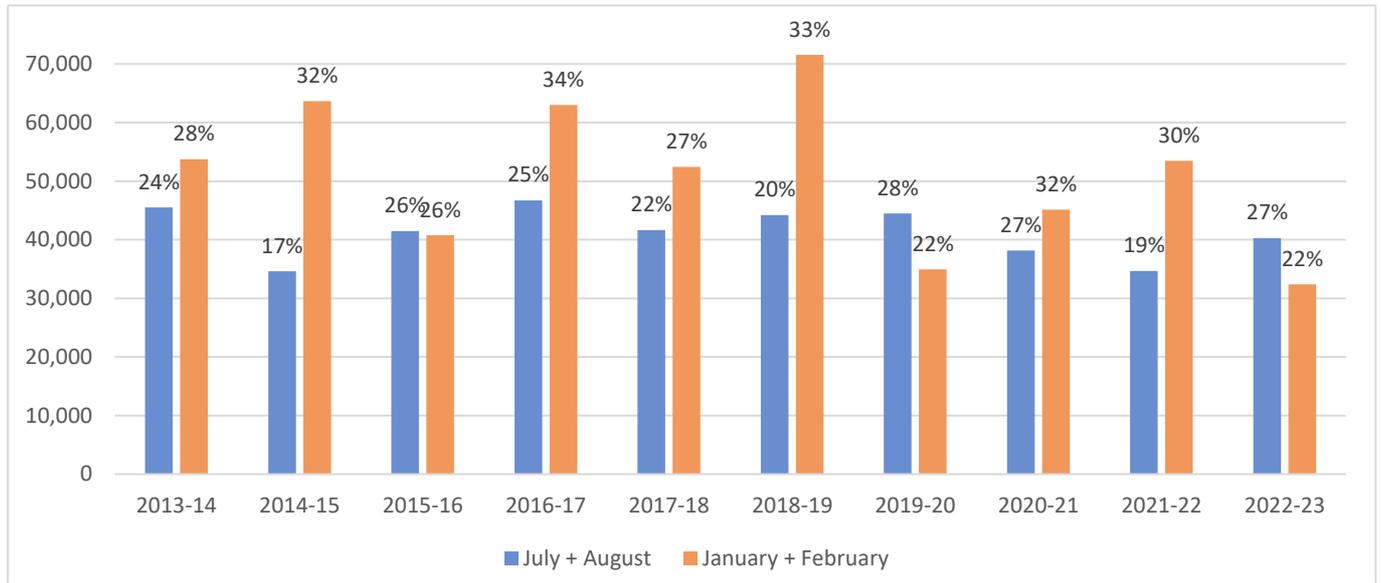


Figure 82: Sum of the monthly passengers of July and August as well as January and February (Own elaboration, based on data from the cable car operators). Data call-out: % of the passengers of the respective months in relation to the overall passengers of the tourism years.

## 11.2 Considerations for the future development

- Sattel-Hochstuckli is and will be also in the future a day-tourism destination, featuring a very low number of accommodation structures.
- Day-tourism destinations are highly dependent on the weather conditions, as visitors, based on the climatic conditions, can quickly decide whether visiting the destination or choose alternative destinations and activities.
- In terms of passenger numbers, based on the data retrieved from the valley station of the revolving gondola cableway Stuckli Rondo, the year 2022-23 saw the second-lowest visitor flows since 2013-14. Only the Covid-19-year 2020-21 saw a lower number of passengers.
- Starting from an equal distribution of passenger flows between the summer and winter seasons in 2013-14, 2022-23 saw a preponderance of flows during the summer season (67%) in relation to the winter season (33%).
- Although the distribution of passenger flows of 2022-23 showed almost  $\frac{3}{4}$  of them in the summer, the absolute number of summer passengers decreased by -16% if compared to 2018-19 and by -4% if compared to 2021-22. Especially the month of September 2022-23 saw the lowest number of passengers (11,426 passengers), if compared to the years from 2013-14 to 2022-23. It seems that currently the PWA is not only struggling with declining numbers during the winter season (connected also to the potentially declining snow conditions), but also during the summer season.

## 12 PP12 – Balderschwang (DE)

The altitude of the PWA extends from 1,044m to 1,437m, its height difference being 393m. It offers 13 ascent facilities, 34 slopes and 41 slope km.

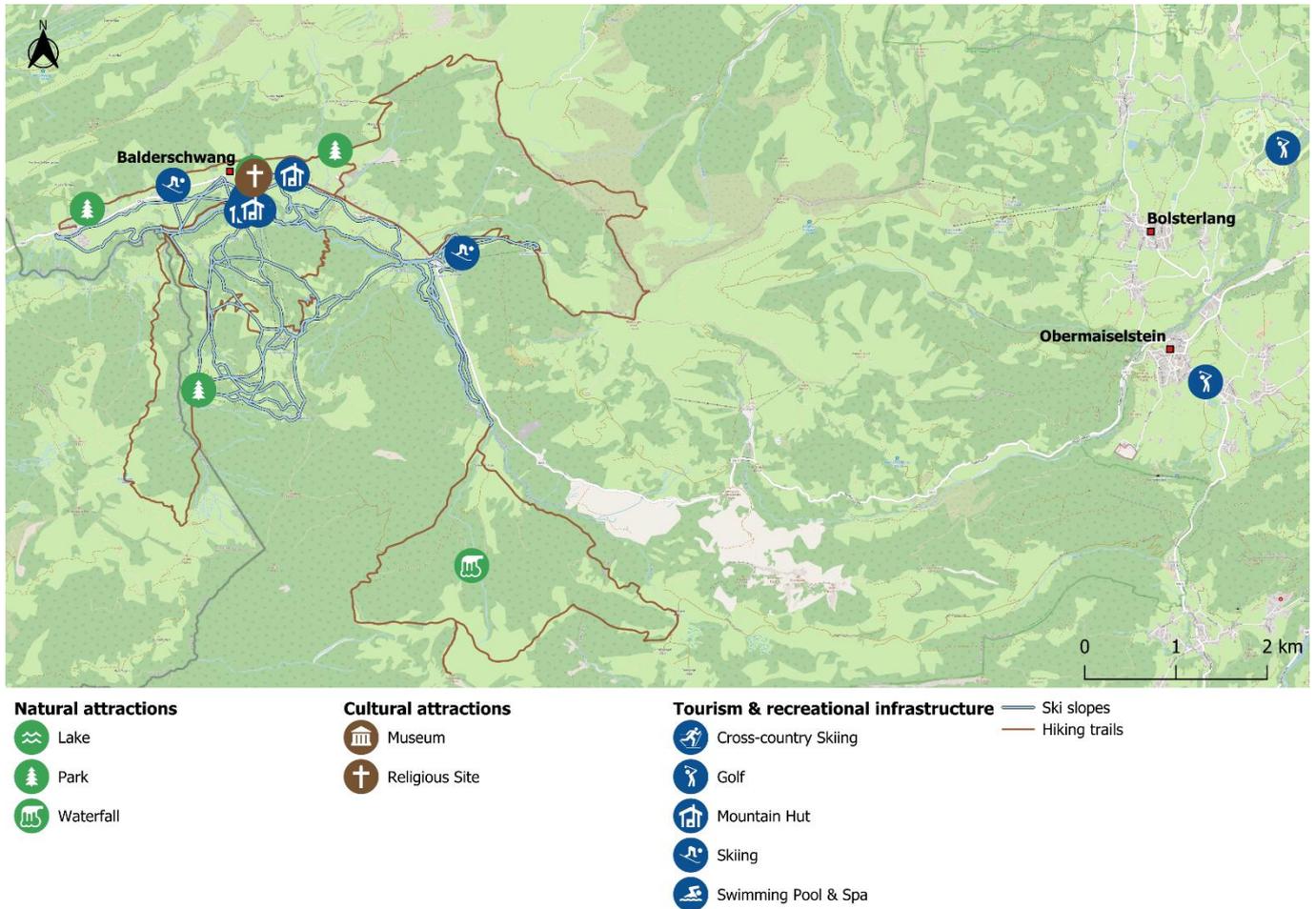


Figure 83: Overview of the German PWA Balderschwang and its attractions (Own elaboration, based on the data provided by the partner)

Its main activities and attractions encompass the following:

Snow-specific activities	Other non-snow specific activities & attractions in winter	Activities & attractions in summer	Events
Skiing, Snowboarding	Natural & cultural sites	Natural & cultural sites	<b>Winter:</b>
Ski touring	Guided tours	Hiking	Winterfest
Cross-country skiing	Gastronomy	Trekking	
Snowshoe hiking	Wellness areas	Mountain / road biking	<b>Summer</b>
Winter hiking		Paragliding	Hüttenpass (hiking tour with activities at mountain huts)
Sledding		Wellness areas	
		Motorcycling	

Table 18: Overview of the activities of Balderschwang, divided into snow-specific, non-snow specific and summer activities.

The PWA Balderschwang has an overall population of 482 inhabitants. The area of the municipality extends over 41.74 km<sup>2</sup>.

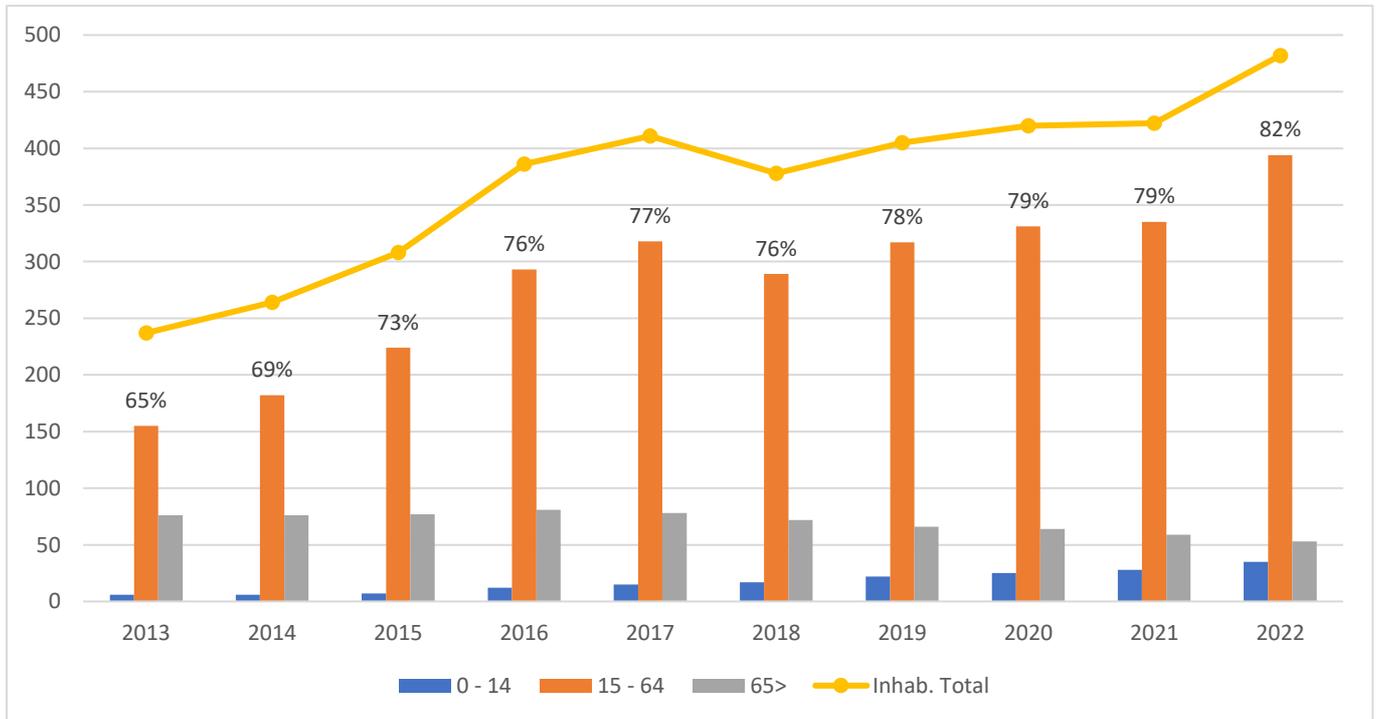


Figure 84: Development of the population and the different age groups of Balderschwang from 2013 to 2022. The data call-out represents the share of the potential working population (age 15 to 64) in relation to the overall inhabitants (Own elaboration, based on data from Statistics Bavaria, 2023a).

Throughout the last 10 years, the population of Balderschwang has been steadily increasing.

In 2022 there were 28 2<sup>nd</sup> homes in Balderschwang, which are integrated in the accommodation infrastructure.

## 12.1 TI – Tourism demand

### 12.1.1 Yearly arrivals & overnight stays

Comparing the pre-Covid-year 2019 with the post-Covid-year 2022 reveals an increase of 1.3% of the arrivals (from 46,353 in 2019 to 46,949 in 2022) and an increase of 6.5% of the overnight stays (from 179,733 in 2019 to 191,356 in 2022). Due to the higher increase in overnight stays in comparison to the arrivals, a potential increase also of the average length of stay can be deduced, which in fact grew from 3.88 days in 2019 to 4.08 days in 2022.

Hereinafter the representation of arrivals and overnights from the year 2019 to 2022.

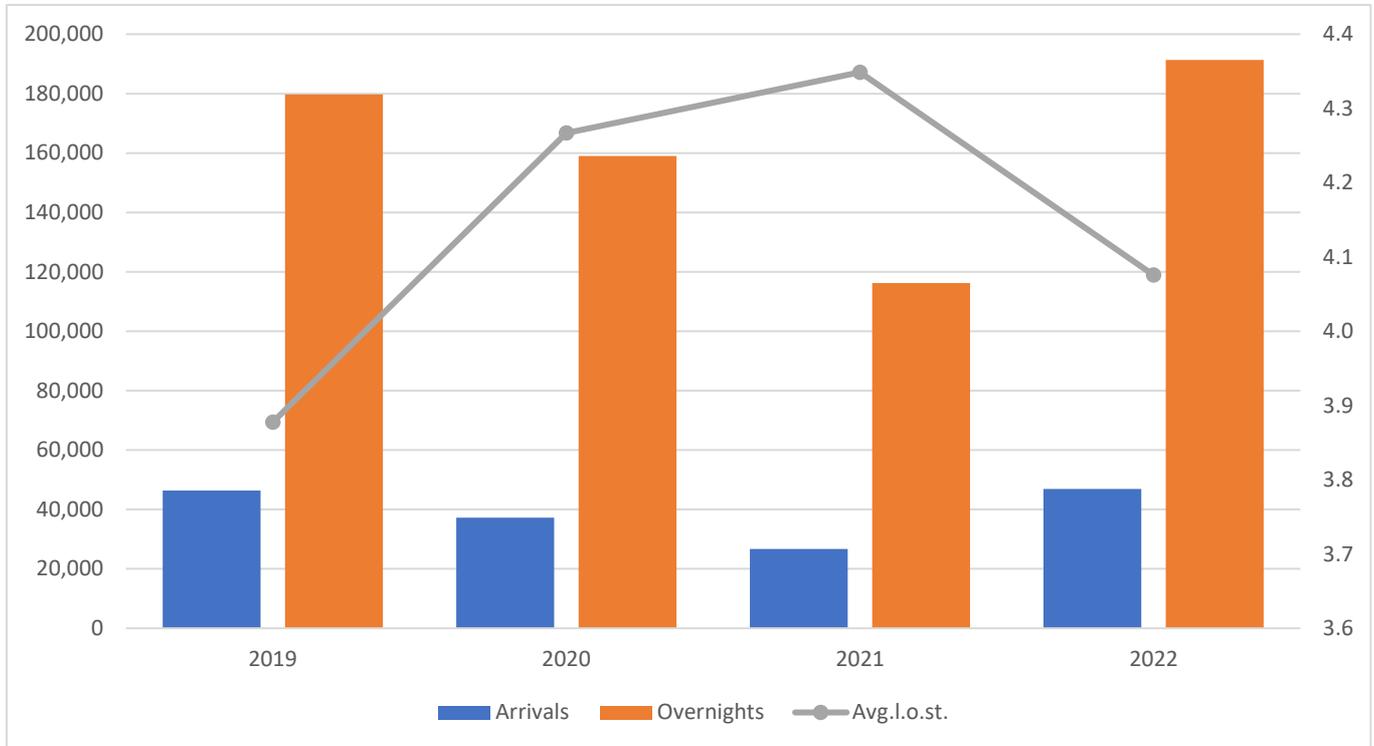


Figure 85: Year arrivals, overnight stays and average length of stay from 2019 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

Due to the influences of the Covid-pandemic the data of 2020 and 2021 must be treated with care, especially the average length of stay of these years.

### 12.1.2 Arrivals & overnight stays: Winter & summer season

The differentiation between winter and summer seasons allows to better understand the seasonality of Balderschwang, although due to data unavailability it was only possible to visualize the arrivals and overnights from the summer season 2019 (May to October 2019) onwards.

Balderschwang’s tourism flows are distributed between the winter & summer season in the following way:

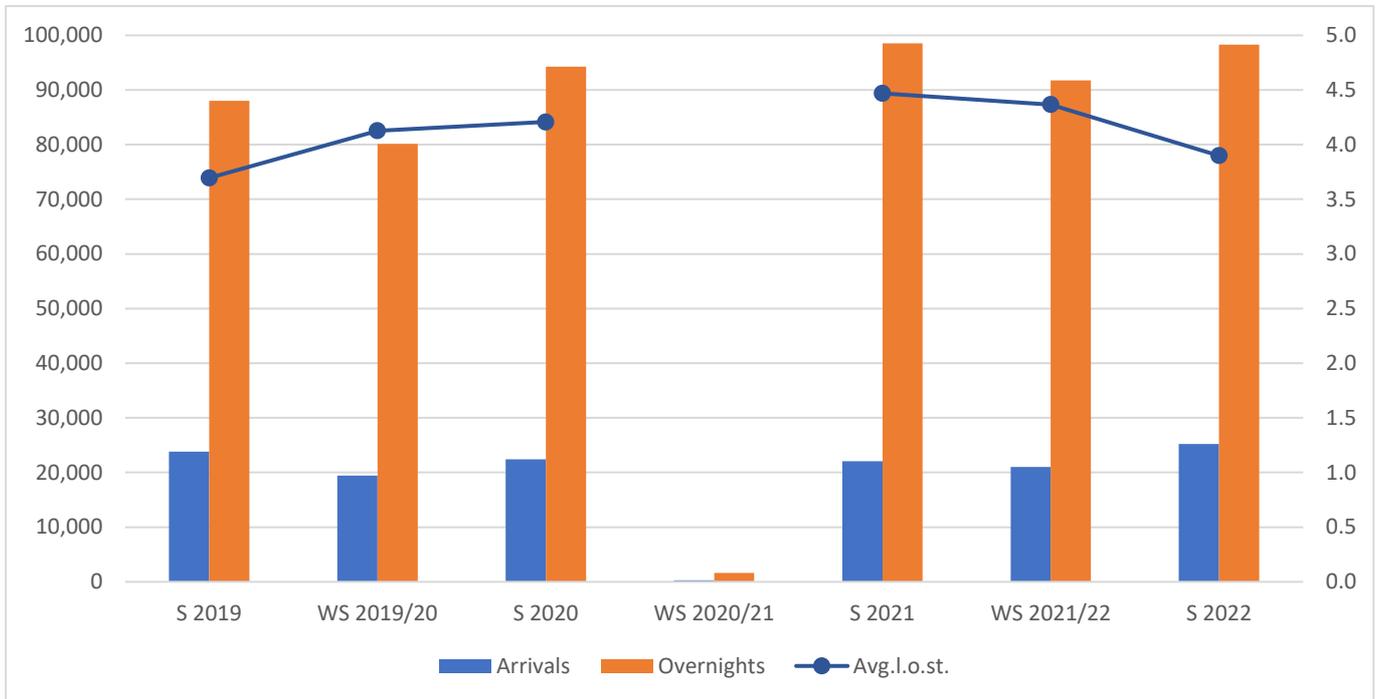


Figure 86: Arrivals, overnight stays and average length of stay divided between winter & summer seasons from 2019 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a)

Due to the absence of earlier data, the first season, which is represented in the figure is the summer season 2019 (May – October 2019), during which 23,817 arrivals and 88,013 overnight stays were registered, resulting in an average length of stay of 3.7 days. The subsequent winter season 2019/20 (November 2019 – April 2020) saw average tourism flows from November 2019 until February 2020, but was heavily influenced by the Covid pandemic. The latter resulted in a drop of tourism flows in March 2020 and their standstill in April 2020. Although still marginally influenced by Covid restrictions, the first comparison between the winter and summer seasons can be undertaken for the winter season 2021/22 (November 2021 – April 2022) and the summer season 2022 (May – October 2022). The overall distribution of the overnights between winter and summer was almost equal, with 48.3% in winter (91,765 overnights) and 51.7% in summer (98,312 overnights). The latter saw also the 2<sup>nd</sup> highest overnights of the past 3 years, exceeding the summer season 2019 by more than 10,000 overnights, and having only 200 overnights less than the summer 2021.

The monthly comparison between the pre-Covid year 2019 and the post-Covid year 2022 (figure below), reveals that almost all the monthly overnights of the year 2022 were higher than those of the year 2019 (except for February, March and December). Both in 2019 and 2022, the month with the highest number of overnight stays was February, which with 25,188 overnights in 2022, registered 13% of the overall overnights of 2022, followed by January with 24,256 overnights (12.7%), August with 23,838 overnights

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(12.5%) and July with 19,499 overnights (10.2%). The sum of these 4 months represented almost 50% of the total overnights of 2022.

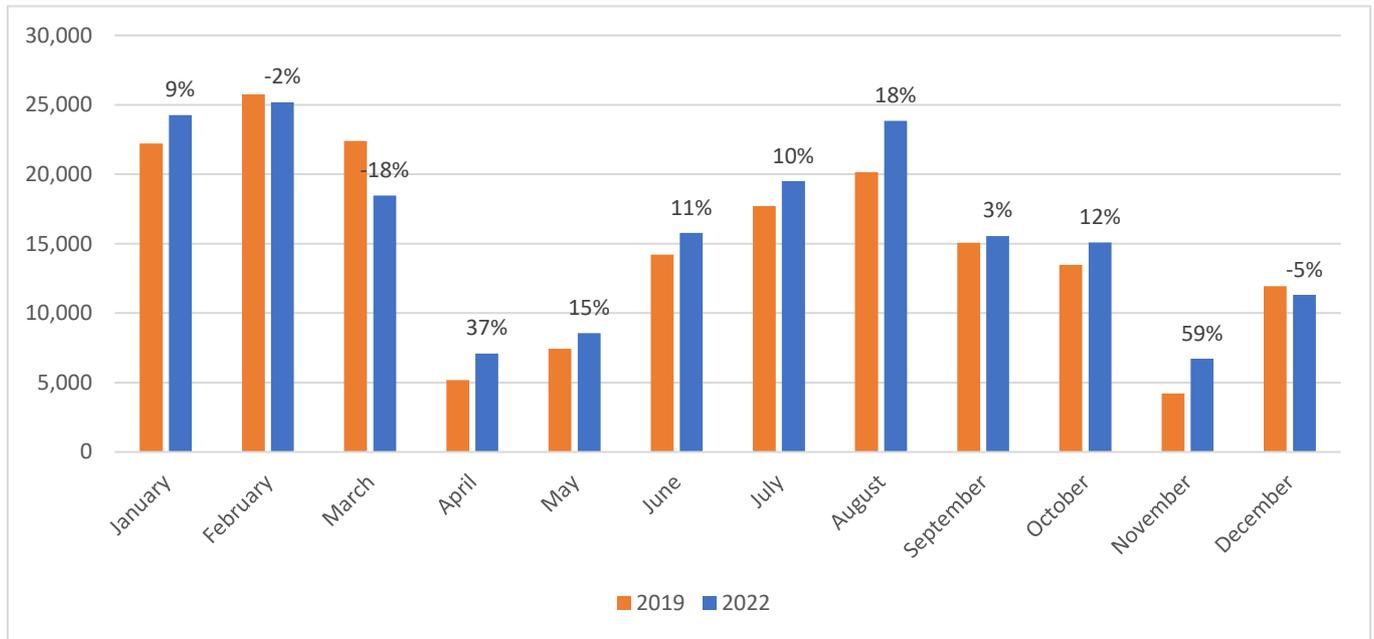


Figure 87: Comparison of the monthly overnights of years 2019 and 2022. The data call-out represents the difference of the monthly overnights between 2019 and 2022 in % (Own elaboration, based on data from Statistics Bavaria, 2023a)

**12.1.3 Domestic & foreign guests**

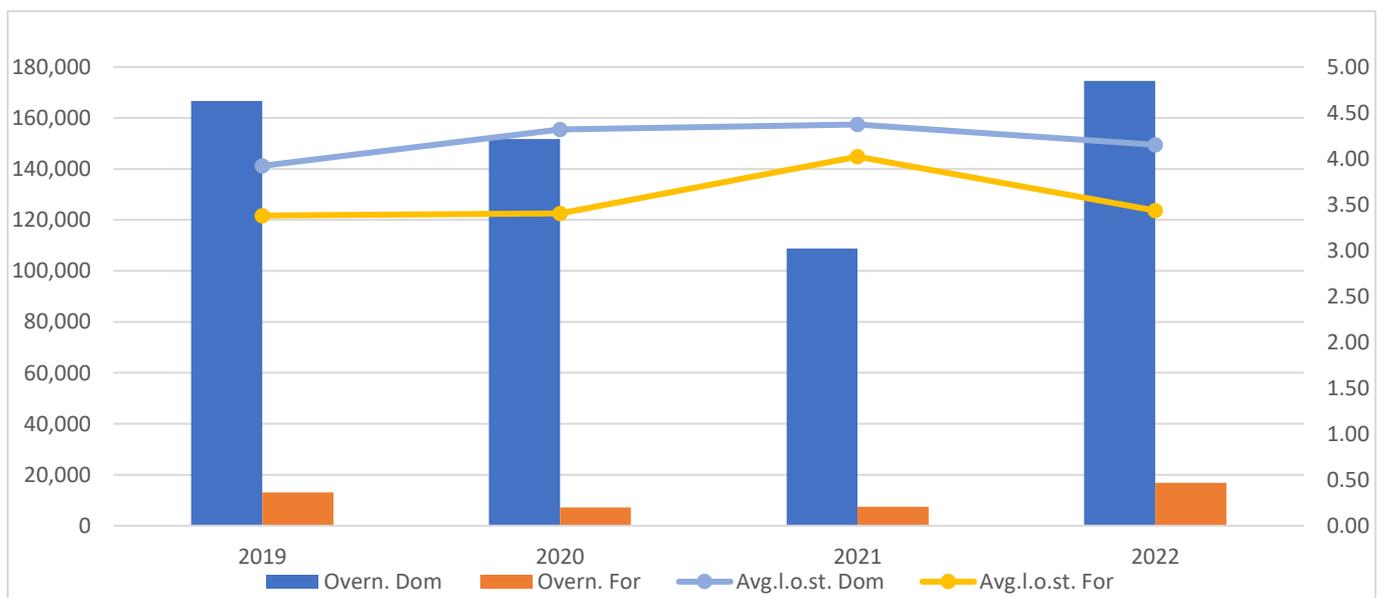


Figure 88: Overnight stays divided between domestic & foreign guests (Own elaboration, based on data from Statistics Bavaria, 2023a)

Balderschwang features a guest structure, which is strongly influenced by the domestic source market.

Out of the total overnights of 2022 (191,356), 91.2% were generated by domestic guests (174,539 overnights). Although foreign guests usually tend to exhibit a longer average length of stay, in Balderschwang this indicator is higher for the domestic guests (4.15 days) than the foreign guests (3.43 days).

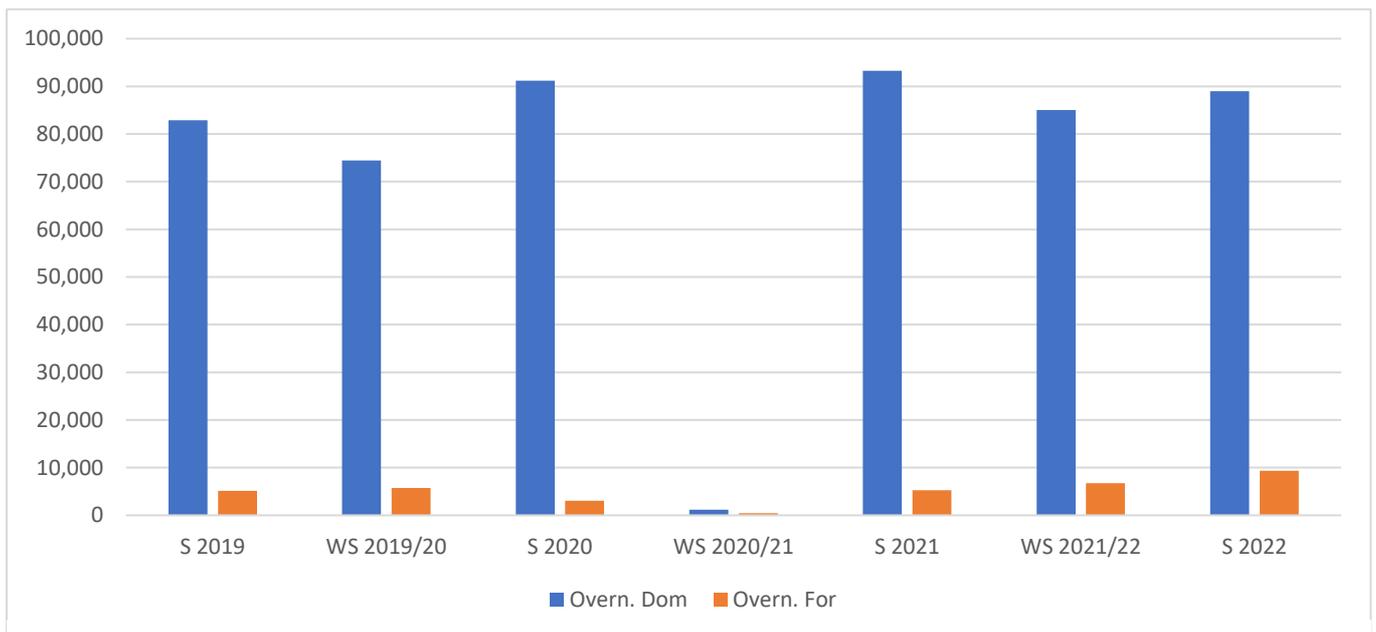


Figure 89: Overnight stays divided between winter & summer seasons and domestic & foreign guests from 2019 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a)

The overnights of domestic guests appear to be relatively stable between winter and summer seasons, tending to be slightly higher during the latter, and resulting in 85,014 overnights in the winter season 2021/22 as well as 88,981 in the summer season 2022. Comparing the foreign overnight stays of summer 2019 and winter 2019/20 to the most recent data (overnights of summer 2022 and winter 2021/22), both summer and winter overnights increased (82% in summer, 18,2% in winter).

### 12.1.4 Foreign source markets

Although encompassing only a marginal part of the arrivals (10.4% in 2022) and overnight stays (8.8% in 2022), a deeper analysis of the composition of the foreign overnights can generate additional insights regarding the origin of Balderschwang’s tourism flows. Due to the absence of earlier data, a clear trend of the development of foreign tourism flows can’t be identified, but if comparing the foreign arrivals and overnights between 2019 and 2022, an increase can be seen: +26% arrivals, +28% overnights.

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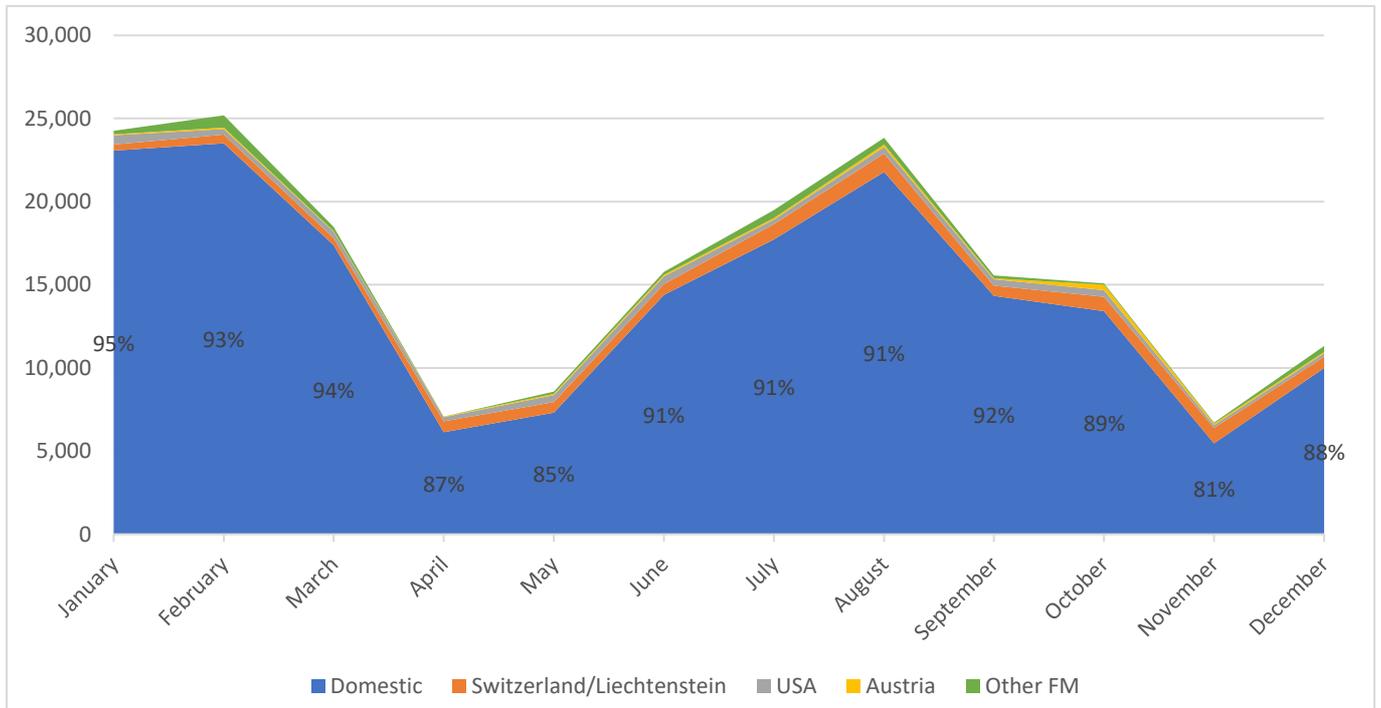


Figure 90: Distribution of domestic & foreign overnights between the different source markets in the year 2022. The data callout represents the share in % between domestic & all foreign overnights (Own elaboration, based on data from Statistics Bavaria, 2023a).

The distribution of the 4 major foreign source markets indicates, that the main foreign tourism flows originate from Switzerland/Liechtenstein, which in 2022 represented 6% of the arrivals and 4% of the overall overnights (2,613 arrivals, 8,349 overnights), and exhibiting a lower average length of stay of 3.2 days. Surprisingly, the 2<sup>nd</sup> foreign source markets are the United States, with 2% of both the overall arrivals and overnights (1,074 arrivals, 4,208 overnights). The presence of American guests is not attributable to a specific event, since the flows are distributed throughout the different months of the year, though in 2022 they tended to be present also in the shoulder seasons (May, June, October) besides in some high season months (January, August). Furthermore, Balderschwang seems neither to be a stop-over destination for the American guests since their average length of stay is 3.9 days (and therefore also slightly higher than the avg.l.o.st. of the guests from Switzerland/Liechtenstein).

## 12.2 T2 – Tourism accommodation

### 12.2.1 Accommodation structures & bed places

Balderschwang features an accommodation sector, which in 2022 comprised a total of 72 structures and 1,265 bed places. Its sector includes the following accommodation types:

2022	Number of Structures	Number of Beds	Avg. Beds x structure	Share of beds x accom.
5 Star	2	257	129	20.3%
4 Star	2	138	69	10.9%
3 Star	1	68	68	5.4%
1-2 Star	1	24	24	1.9%
Apartments	28	318	11	25.1%
Pension	7	258	37	20.4%
Agritourism	1	23	23	1.8%
Camping	2	61	31	4.8%
2nd homes	28	118	4	9.3%
<b>Total</b>	<b>72</b>	<b>1,265</b>	<b>18</b>	<b>100.0%</b>

Table 19: Number of structures and beds per accommodation type in 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

In comparison to the other PWAs, Balderschwang's accommodation sector features two peculiarities: First, the hotels are not commercialized through their stars, and second, the 2<sup>nd</sup> homes are integrated in the accommodation offer.

In terms of number of structures, the most prominent accommodation type in Balderschwang are both the apartments and 2<sup>nd</sup> homes (28 structures each), while based on the bed places, the apartments comprise 25.1% beds (318), followed by pensions with 20.4% (258 beds) and 5-star hotels with 20.3% (257 beds). The hotel beds totalize 38.5% of the overall bed places of Balderschwang, with the structures of the higher categories exhibiting also a higher average beds per structure.

### 12.2.2 Gross bed availability & occupancy

Multiplying the available beds of Balderschwang (1,265 for 2022) with the days of the year (365) yield the gross bed availability, which is 461,725 beds. This number can then be used to calculate the gross bed occupancy, which is the relation between available and occupied beds (overnights), expressed as a percentage on a yearly or monthly basis. Unfortunately, this indicator does not consider the actual opening and closing days of the accommodation structures, an information, which is not easily retrievable. Furthermore, for Balderschwang the number of structures and beds was only retrievable for the year 2022, therefore the bed availability & occupancy has been calculated on the data of that year.

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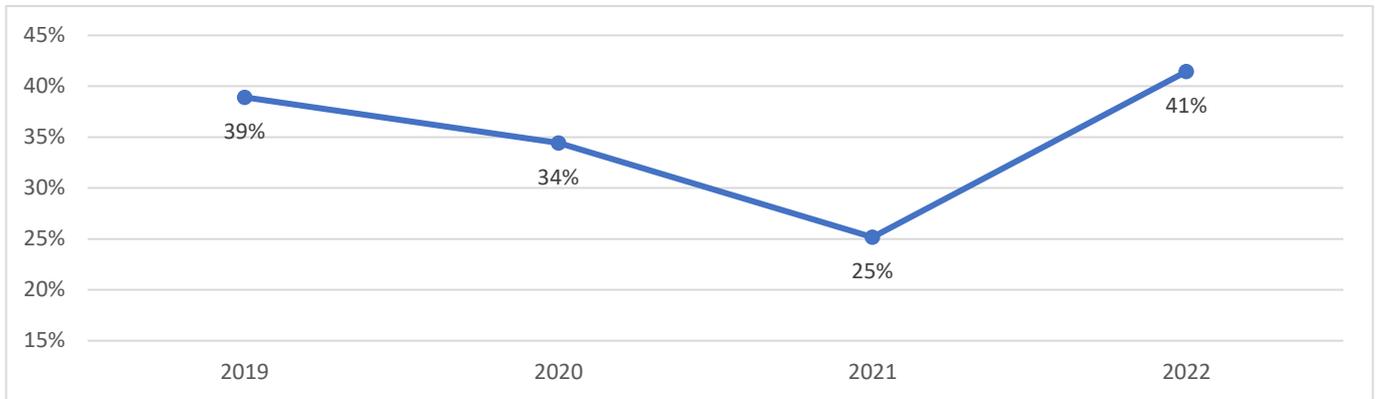


Figure 91: Evolution of the yearly gross bed occupancy in Balderschwang from 2019 to 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

While in 2019 the yearly gross bed occupancy was at 38.9%, in 2022 it increased to 41.4%.

Considering the monthly gross bed occupancy helps to identify the underutilization of the infrastructural accommodation capabilities throughout the year. To still slightly take into account the different seasonal conditions in relation to the different accommodation types, the beds registered under the category “Camping”, traditionally closed during the colder periods of the year, have been omitted during the winter season (from November to April) for the calculation of the second indicator (Gross Bed Occupancy - WS - Camping). The adjustment remained between the range of +0.9% and +3.6% in the months of the WS.

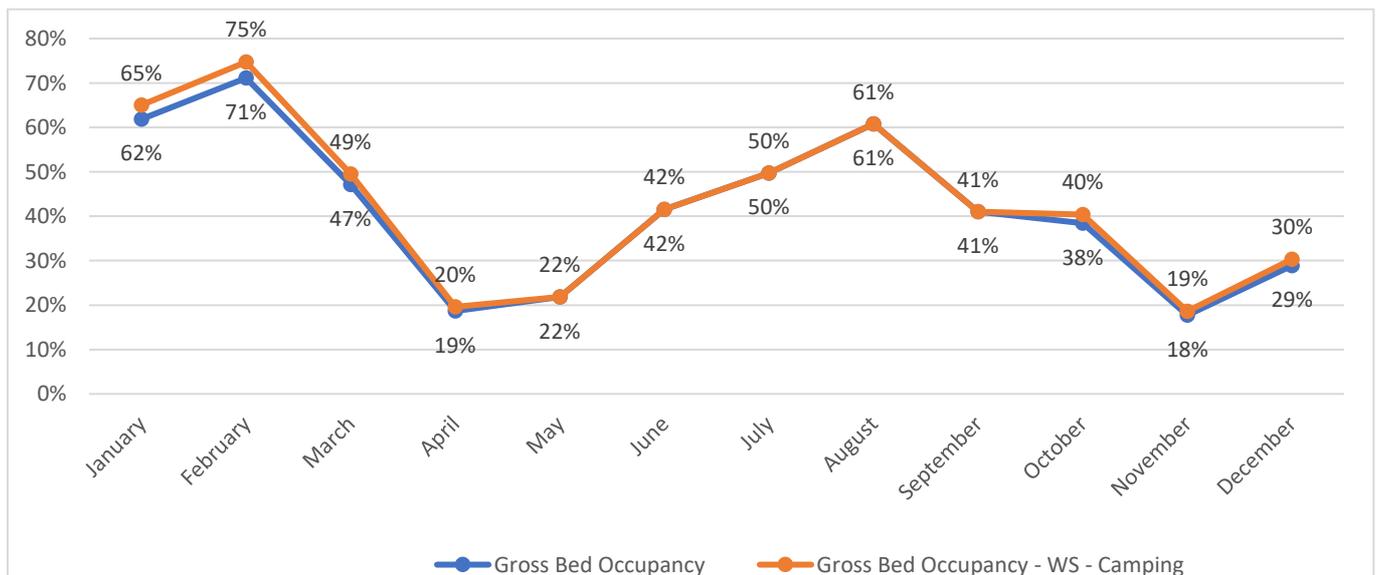


Figure 92: Gross bed occupancy for the year 2022 (Own elaboration, based on data from Statistics Bavaria, 2023a).

The bi-seasonality of Balderschwang in 2022, resulting in an annual occupancy rate of 41.4%, influenced its monthly occupancy rate, which varies between 74.7% (February, without camping beds) and 19.6% (April, without camping beds).

During the winter season, the two strongest months (February and January) represent the high season, while the high season months in summer are August and July with a gross occupancy rate of 61% and 50%. This postulates that, while during the shoulder and low season months in winter and summer the utilization of the infrastructural accommodation capabilities needs to be increased, also the high season month of July has to be considered during the definition of future development strategies.

## 12.3 Considerations for the future development

- Good data availability. Also, availability of monthly tourism tax revenues (€2 per overnight);
- Although challenged by CC, the PWA's overall tourism sector seems not to be overdependent on ski tourism, due to classic mountain bi-seasonality with shoulder seasons;
- Non-ski dependent activities and seasons can be expanded, and don't need to be created ex-novo;
- Overnights relatively distributed throughout the year;
- Bed capacity utilization is adequate;
- No accommodation typology is predominant;
- Non-ski dependent activities and seasons can be expanded;
- New non-ski dependent activities can be based on existing activities and resources;
- The PWA has been known for its snow-security, but it experiences a change due to CC. The stakeholders want to embark on new tourism paths and offers.
- Balderschwang's guest structure is largely oriented towards the domestic market, which in 2022 generated 90% of the arrivals (42,052) and 91% of the overnights (174,539). Besides the advantages of having a strong domestic market, its average length of stay is also higher, than that of the foreign markets (4.2 days domestic, 3.4 days foreign). Since the domestic market has a wide geographical scope, a further segmentation of German market source regions could generate further insights regarding main guest travel behaviours.
- The presence of guests from the USA is surprising, especially since their overnights in 2022 did not concentrate on one specific month (and therefore were not utterly generated due to a specific event) but were distributed throughout the year. Furthermore, with 3.1 days their average length of stay was just slightly under the overall average (4.1 days), and besides being present during some high season months (13% of American overnights in January, 9% in August), 40% of their overnight stays were in shoulder season months (11% in June, 10% in May as well as October, 9% in September). This market could be interesting for the further development of the overnights in shoulder seasons.

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