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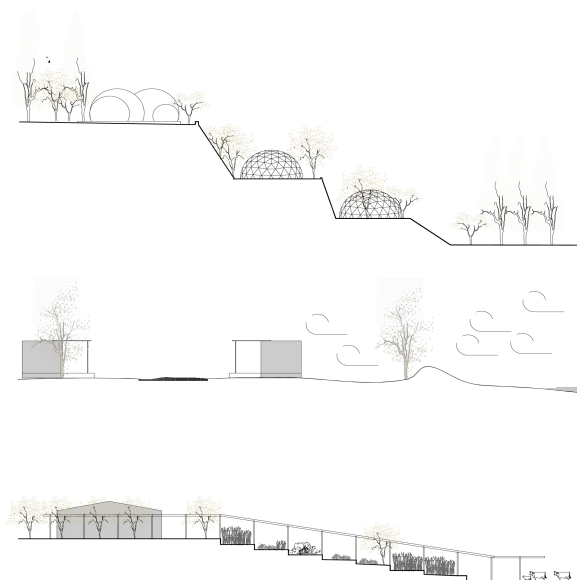


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## Article

# The Sustainability of the Campsite as It Relates to Morphology, Climate and Landscape

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**Abstract** Recent data on the increase in the number of tourists in the outdoor tourism sector led to the need for greater attention to this phenomenon relating to environmental impact. Campsites and administrations deal with the sustainability issue regarding land use, climate and landscape, adopting sustainability protocols and applying a sustainable tourism approach. Among the main challenges is the need to deal with the local landscape. Campsites must define settlement systems that find site-specific solutions in compliance with the morphology, climate, and vegetation as environmental impact mitigation strategies. This study examines three case studies of campsites rethinking for environmental protection, starting from the settlement system of the maxi-caravans cluster. La Rocca Camping Village (lake) fits into the landscape following its morphology; Spiaggia e Mare Holiday Park (sea) contrasts the climatic element using a directed settlement; Agriturismo Fattoria la Palagina (hills) replicates the existing landscape by generating an integrated one. The case studies follow fundamental parameters for a landscape approach of campsite design: morphology, land use, biodiversity, sustainability and heritage. The paper aim is to demonstrate the sustainability of outdoor tourism, with respect to the landscape. The research results offer strategies for planning and regeneration of campsites to respond to sustainability issues.

**Keywords** outdoor tourism; campsite; camping; sustainability; landscape; climate; morphology; biodiversity

## 1. Introduction

### 1.1. State of the Art: Outdoor Tourism

Outdoor tourism is “a form of playful use of the territory that is immediately connected to the quality of the landscape, which becomes the habitat for the tourist as well as an element of attraction” [1]. It is configured as a type of holiday involving activities within the natural context. In outdoor tourism, the relationship between humans and nature through outdoor recreation plays a fundamental role [2]. For this reason, the landscape value in which the accommodation facilities are inserted must be evaluated programmatically. Furthermore, outdoor tourism almost always involves sensitive natural landscapes (sea, lakes, hills, and mountains). Therefore, it must consider its environmental impact linked to the use of the territory and its resources [3].

At the same time, open-air accommodation facilities constitute real “holiday cities” [4] both in terms of size and settlement typology where the natural environment offered to tourists is safe because it is circumscribed, aesthetically defined because easily recognizable, and comfortable both from a perceptive point of view and from the point of view of use.

The Italian case is particularly significant for the richness of landscapes, their cultural value, and the socio-economic impact of this form of tourism [5]. According to Human Company, 56.6 million visitors are expected from June to September 2023, with an increase of 2% compared to 2022 (55.5 million) [6]. Over 13% of the Italian Gross Domestic Product (GDP) is covered by tourism [7] which is why it is crucial to focus the study on Italy. Furthermore, “Italy, together with Spain and Denmark, is the country with the largest campsites: 504 beds on average in 2021” [8].

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## Highlights of Science

In Table 1, you can see the number of accommodation facilities and beds in Italy from 1990 to 2021, showing almost constant growth in both, with a slight decrease during the pandemic period.

**Table 1.** Number of accommodation facilities and beds in Italy, specifically in campings and tourist villages during the years [8,9].

Year	Accommodation Facilities (campings and tourist villages)	Beds
1990	2319	1,228,098
1991	2299	1,227,025
1992	2341	1,266,969
1993	2279	1,224,791
1994	2346	1,223,671
1995	2346	1,269,582
1996	2367	1,308,380
1997	2379	1,315,678
1998	2375	1,311,006
1999	2355	1,317,153
2000	2376	1,314,010
2001	2370	1,327,103
2002	2374	1,329,274
2003	2530	1,343,134
2004	2529	1,327,588
2005	2411	1,344,242
2006	2506	1,357,208
2007	2587	1,331,879
2008	2595	1,360,935
2009	2573	1,324,383
2010	2610	1,353,729
2011	2659	1,367,044
2012	2670	1,358,044
2013	2642	1,328,079
2014	-	-
2015	2708	1,365,661
2016	-	-
2017	-	-
2018	2612	1,346,536
2019	2616	1,322,467
2020	2506	1,304,744
2021	2568	1,306,693

Regarding outdoor tourism in Italy, reference is made to different accommodation facilities: farmhouses, mountain huts, tourist villages, and camping. Furthermore, this article refers to camping, i.e., structures organized on open-air pitches, of which about 60% is intended for accommodation (tents or caravans) owned by the client. In contrast, the rest is generally intended for maxi-caravans or lodges owned by the structure, constituting a seasonally permanent landscape. Therefore, it is possible to act to strengthen the prevailing landscape systems in this type of structure. The prevailing landscape identifies the reference landscape system, which confirms the presence of the accommodation facility (sea, lake, mountain, and hill) and constitutes the intrinsic value of choosing an open-air holiday. The internal landscape of the camping must tend to this by combining the built infrastructure.

In recent years, this type of structure has seen strong growth in the introduction of maxi-caravans and other removable products, characterizing the landscape of camping and bringing it closer and closer to that of villages. The mobile units (Maxi-Caravan) and the demountable ones (Geodetic dome and Lodge) offer various advantages: they are prefabricated units, do not

consume land, are easily removable, and allow quick connection to the utility network. Thanks to these characteristics, in addition to their size, they can be easily installed in campsites, on empty land, or in pitches usually intended for tents or caravans. The dimension of the scope of these “holiday cities” [4] in the open air can be read in the ISTAT data [10]: in 2021, ISTAT recorded 2568 between tourist villages and campsites, for a total of 1,306,693 beds, capable of absorbing about 8% of Italian tourist presences.

The open-air accommodation facilities have some standard founding features, which remain immanent despite the temporality of their use (seasonal, generally from April to October) and the geographical location:

- Each accommodation facility is defined by a perimeter, variable in its materialization. This dividing line can consist of a wall, a metal fence, or even just plant elements (hedge); it tends to be opaque or obscured to maintain privacy. Crossing the border to access the internal space of the accommodation facility and the activities included therein is generally exclusive to those staying in the facility;
- Within each accommodation facility, there is always a system of stable services, built with different technologies, which host functions and services for users: reception, restaurants, sports activities, commercial activities, recreational activities;
- Inside each accommodation facility, most open space is intended to host “mobile housing arrangements”. These fittings are removable, whether owned by the user (the tourist), such as campers, caravans or tents, or owned by the structure or external operators, such as maxi-caravans and lodges (structured tents).

The naturalistic system inside open-air accommodation facilities can have two different origins: it can be pre-existing, as in the case of pine forests, or it can be built ad hoc, taking the local landscape as a reference concerning the number of pitches. In this case, the landscape is built, taking the local one as a reference and depending on environmental factors such as orientation. The landscape of the pine forests on the Adriatic coast (such as the historical one of Ravenna) or the use of cypresses on the lakefront of Lake Garda are explicit references that refer to an iconic identity of the territory. Over time, most of the accommodation facilities have dealt with these issues primarily aesthetically and functionalist, without considering the aspect of environmental compatibility declined according to the specificity of the places. Undoubtedly, the outdoor tourism sector, also due to this symbolic potential, has the opportunity to generate a strong attraction for foreign tourism, especially in the regions of northern and central Italy, such as Veneto, Lombardy, and Emilia-Romagna, easily accessible by visitors from central Europe.

However, the attraction of these contexts must be well balanced between a comfortable and receptive service linked to the outdoor experience and a sustainable approach linked to reading the territory and its specificities.

#### 1.1.1. New Trends and Data of Outdoor Tourism Sector

The outdoor tourism sector is undergoing profound transformations. Some of these have been underway for a few decades, such as the transition from a condition of offering essential services to a complete holiday offer, while other trends are more recent, such as attention to environmental protection and safeguarding issues and the development of the concept of experientiality, in terms of tourist attractiveness and quality of accommodation. The latter trend is actually stronger in countries such as those of northern Europe, even though in recent years also more Mediterranean countries are acquiring more consciousness on ecological themes and this is due to the European and international plans and documents such as Agenda 2030 to reduce human impact on the natural environment.

Outdoor tourism, which by definition arises from an intense contact with nature, cannot fail to address the issue of sustainability by interpreting it as a potentially intrinsic factor [11]. In recent years, the growth of awareness of environmental issues and a new ecological culture has broadened the concept of “respect for nature” by making explicit values that go far beyond the aesthetic fact and involve more substantial issues such as the impact of human actions on the environment, the protection and promotion of landscapes and biodiversity, the reduction of the consumption of non-renewable resources and the reduction of sources of pollution [12]. Moreover, in the face of climate change, sustainability has become an overt necessity from a commercial point of view, induced by more aware and demanding tourists. For this reason, both open-air accommodation facilities and administrations are dealing with the issue of sustainability with an

increasingly less superficial approach, adopting sustainability protocols and mobilizing to enter the dynamics of sustainable tourism. The urgency that poses the theme is also acquired by some territorial governance practices, as in the case of the Municipality of Cavallino Treporti (in the province of Venice, one of the places where the most significant number of open-air accommodation facilities are located in Italy) which has published an Environmental Declaration in which it describes objectives and strategies aimed at sustainable development and the protection and safeguarding of its territory [13], which is added to the “Pilot project for the management of the SIC ZPS coastal areas of the municipality of Cavallino Treporti” [14], which intends to spread the culture of protection and sustainable use of coastal areas, to preserve natural habitats, landscapes, natural resources and coastal ecosystems.

To define sustainable tourism, WTO provided one in 1987 “sustainable development of tourism meets the needs of tourists and host areas and at the same time protects and improves opportunities for the future. It must be the guiding principle for managing resources such that economic, social and aesthetic needs can be satisfied and, at the same time, cultural integrity, the total balance of nature, biodiversity and support for improving the quality of life can be preserved” [15]. From this assumption, the sensitivity towards a more aware approach to sustainability must be lived in protecting the territory.

Suppose the attention to the context of insertion of the accommodation facility is expressed by environmental protection. In that case, the attention towards the tourist is manifested through experientiality, which tends to make the tourist’s stay unique by increasing the accommodation offered with activities or specific features. Within the tourism sector, experientiality is a decisive factor that enhances the physicality of the holiday and its contextualization. This presupposes a renewed approach to the outdoor tourist settlement which is now confronted with the natural context through actions of mitigation, safeguarding, and protection towards the natural landscape [16]. The theme of experientiality includes within it a series of issues that are not only environmental but also cultural and perceptive. The process that leads to the experience theme involves observation, defined by Urry [17] as Tourist Gaze. The tourist gaze can be built in two ways: internally, through the decoding that the tourist makes based on his socio-cultural filters, and externally, by professionals in the sector who create an image of the tourist product that will influence the tourist’s expectations [18]. Therefore, while the internal construction of the tourist gaze can be developed in all three phases of the journey (before, during, and after the tourist experience), the external construction is more identified in a promotional strategy typical of the phase of choice and planning of the tourist experience. Experientiality, therefore, arises before the actual period of the holiday, and the concept of the Tourist Gaze contributes to the construction of expectations on the uniqueness of the holiday. Thus, for its definition, a tourist’s experience encounters both the social and environmental dimensions provoking a cognitive and emotional response.

The theme of the relationship with nature and the construction of an expectation and an experience is added to the attention towards the quality of the accommodation, which is today specifically developed towards the industrial product maxi-caravan. This type of accommodation has continuously increased demand for open-air accommodation facilities over the past ten years. This housing typology synthesizes the comfort of the bungalow (now obsolete due to its characteristics and regulatory complexity) with the temporality of the caravan and trailer. The maxi-caravan is a removable accommodation sized for 4/6 people equipped with a private external veranda. Due to its managerial, installation, and removability versatility, it has transformed many campsites through the transformation of numerous pitches (a pitch is the space intended for one or more mobile installations and can have variable dimensions) occupied by caravans and seasonal caravans or intended for tents into spaces available for maxi-caravans. Maxi-caravans today represent an added value in the accommodation sector both for their housing characteristics and for their construction peculiarities, linked to easy removability, high customization, and easy movability, needs that are well suited to the requests for change necessary for accommodation facilities today [19]. By introducing maxi-caravan inside campsites it is given more value to the landscape by having a light touch on the site, as well as they can be considered eco-compatible since maxi-caravans at the end of their life can be dismantled and each of its components can be reused for a new life cycle. Furthermore, the maxi-caravan offers the advantage of the temporality of the holiday’s landscape meaning that the open-air accommodations can easily renovate themselves in a fast way.

As Yona Friedman [20] argues, contemporary cities are not capable of satisfying the needs of modern society, whose socio-economic conditions are constantly evolving and changing. Precisely for this reason, even holiday cities should adopt settlement strategies that favor reversibility, temporariness and speed of installation, and maxi-caravans are configured as the most suitable industrial object for the context of insertion.

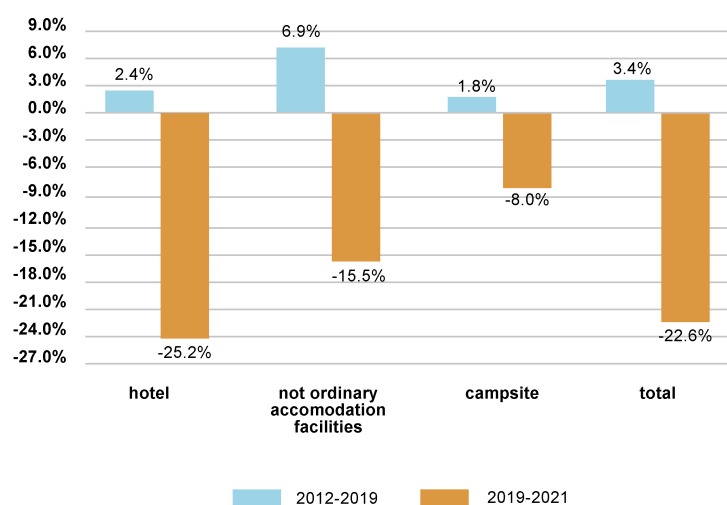
The number of arrivals and overnight stays shows exponential growth from 2005 to 2018, with a slight decrease in 2021 due to the pandemic. However, the number of overnight stays, despite the pandemic period, has consistently shown growth, except for a slight decline in 2021 (Table 2). This trend is particularly evident in Table 3, where a decrease is observed between 2019 and 2020. However, as shown in Figure 1, it is noted that during the pandemic period, the decrease in arrivals at campsites was smaller compared to regular accommodation facilities such as hotels, with only an 8% decrease compared to the 25.2% decrease in hotels. When comparing this data with foreign arrivals, it is almost similar, with the decrease in campsites being consistently smaller than in other accommodation facilities, showing a 13.5% decrease compared to the 39.9% decrease in hotels (Figure 2).

**Table 2.** Italian tourist traffic in campings and tourist villages from 2003 to 2022. Data extracted on 11 September 2023 10:48 UTC (GMT) from Istat [21] and Faita report [8].

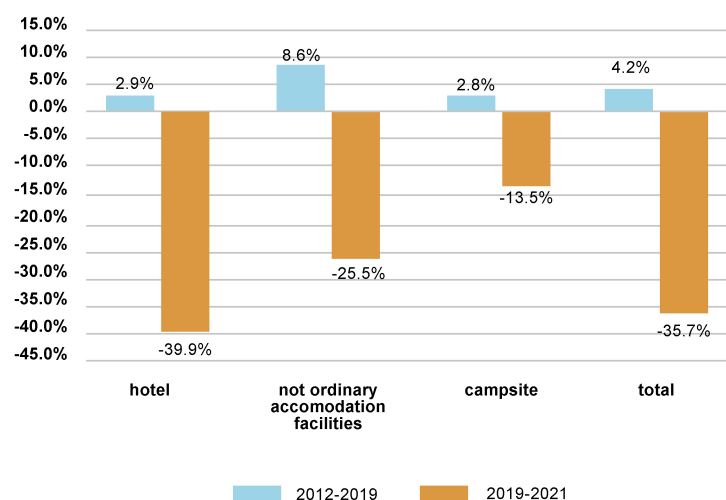
Year	Arrivals	Attendance
2003	4,439,179	37,979,948
2004	1,721,171	16,253,161
2005	4,272,822	36,293,313
2006	-	-
2007	4,676,026	38,035,990
2008	4,662,136	37,544,839
2009–2017	-	-
2018	10,000,000 ca	66,700,000 ca
2019	-	-
2021	8,701,161	54,618,034
2022	10,997,774	67,250,872

**Table 3.** Open-air accommodation offers in Italy. Evolution. Ciset elaboration on Istat Data [8].

AVERAGE ANNUAL VARIATION (%)	2005–2010	2010–2015	2015–2018	2018–2019	2019–2020	2020–2021
ACCOMMODATION FACILITIES	1.6%	0.7%	−1.2%	0.2%	−4.2%	2.5%
BED	0.1%	0.2%	−0.5%	−1.8%	1.3%	0.1%
AVERAGE DIMENSION (BED)	518.7	504.3	515.5	505.5	520.6	508.8

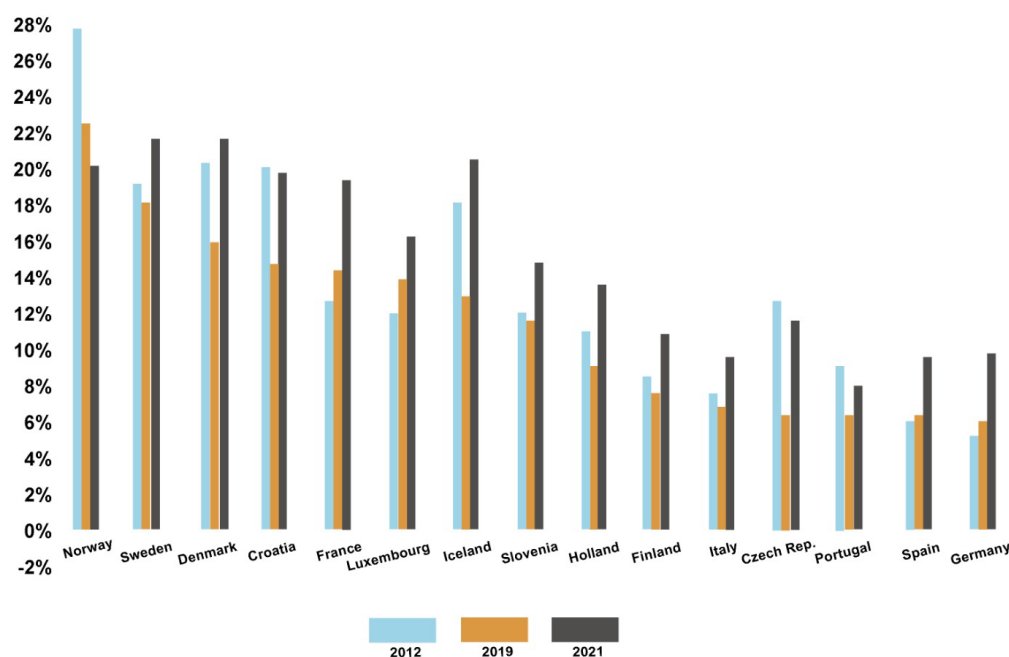


**Figure 1.** The trend in tourist arrivals in Italy by type of accommodation facilities, in the pre- and post-pandemic period (average annual variation %). Ciset elaboration on Istat Data [8].



**Figure 2.** The trend in foreign tourist arrivals in Italy by type of accommodation facilities, in the pre- and post-pandemic period (average annual variation %). CISET elaboration on Istat Data [8].

A particularly noteworthy point is the importance of campsites in different European countries, highlighting how this type of tourism is predominant in Northern European countries such as Sweden, Norway, Denmark, and Iceland, as well as countries like France and Croatia (Figure 3). However, it is evident from the chart that since 2012 (with the exception of a decrease in 2019), all countries have experienced significant growth by 2021.



**Figure 3.** The Importance of Camping and Equipped Areas in Total Tourism by European Country. CISET elaboration on Eurostat Data [8].

## 1.2. From Atopic to Sustainable Landscape of Outdoor Tourism

The article intends to demonstrate that the atopic landscape [22] generated starting from the 60s by open-air accommodation structures, with little relation to the context and nature of insertion, does not allow for fully exploiting this specific tourism form's typical potential. A photograph of the current state of the main places with outdoor tourist destinations in Italy shows that, despite the morphology being different and highly specific every time, how structures such as camping and tourist villages are inserted is always the same: the arrangement of the units and pitches according to a dense modular grid and distribution of the internal infrastructures without a relationship with the context, neglect of the local architectural language. This generally leads to an indifference to the place where they are located leading to neglect of the relationship with the landscape.



The settlement methods combined with the high tourist mass that involves these places require urgent intervention. If landscape protection issues were to be neglected for a long time in planning and sustainable design strategies, the direct consequence would be disastrous for biodiversity and ecosystem balance. Social consequences are also foreseen; overcrowding could be responsible for reversing the phenomenon of attraction of vacation spots: from places of relaxation and regeneration to disillusionment places. The search for the authenticity of tourist destinations, despite having led many tourists to visit less attractive areas than historic areas, in the long term, can transform the areas themselves into accommodation areas that no longer possess the desired attractiveness. In case the spatial development of outdoor tourism is not planned, its expansion could result in low-quality landscapes. The Charter of Ethics for Tourism & the Environment also places a significant emphasis on the right of future generations to enjoy the same heritage that we possess today; correct conservation and identification of load limits acceptable for the environment would be the only tools to prevent irreversible damage.

The object of study of this research is the internal landscape of open-air accommodation facilities. Today it is strongly influenced by the presence of maxi-caravans, protagonists of the evolution of outdoor tourism in recent years, which has recorded a further increase in attendance after the pandemic crisis.

The success of outdoor tourism has led to the development of massive, functionally organized settlement situations that refer, as an aesthetic vision, to that of residential suburbs or emergency camps more than to the vocational one of villages in nature. The relationship with the landscape is, in these situations, delegated to the presence of the external landscape, the prevailing one (sea, lake, mountain). The accommodation facility is understood as a service to support the use of the surrounding area, losing the opportunity to develop these places as real holiday spaces.

Camping and tourist villages, which are often built in parts and annexed, i.e., without long-term planning linked to development margins, concentrate the quality of the space on services and not on living areas or open spaces. Therefore, beyond some indications of flow control and sector safety, there are no development plans, either potential or implemented. However, the collective space, swimming pools, and common places have a central role. The value of the living space is neglected, but it occupies most of the space. If this approach can be understood in terms of mobile living systems (such as campers and caravans) where human spatiality is less than minimal, the maxi-caravan modifies this relationship. The internal space of these environments, although not close to the dimensions of a traditional house, is designed for a long stay. The domestic space, extended into the external veranda and often integrated with private pools and private external space, is designed for an intensive stay within the structure. The domestic space becomes predominant again seen from this point of view and must be developed according to the landscape.

The situation described appears even more paradoxical when compared with the great potential of open-air accommodation facilities: enhancement of the local landscape and sustainability. For the user of open-air accommodation facilities, the specificity of the natural landscape in which the holiday is immersed is a priority item.

### 1.3. The State of the Art of Research on Outdoor Tourism

In recent years, research on outdoor tourism has expanded compared to when there was a lack of widespread theoretical knowledge on the subject. There is a broad field of research on open-air accommodations, particularly their potential to regenerate entire parts of cities or coastal areas, especially in the Mediterranean [23]. Many studies focus on analyzing interesting case studies of innovative campsites, especially those developed in the second half of the XX century. Examples include Camping Costa Blanca in Cambrils, Camping Salou in Salou, Spain [24], and the phenomenon of tourism related to the Costa Smeralda in Sardinia, which constitute forward-thinking examples from the period between the 1960s and 1990s when the goal was to harmonize the existing natural vegetation, avoiding environmental contrasts or imbalance [4].

Much of the research addresses the historical and cultural aspects that have shaped the landscape of outdoor tourism up to the present day, exploring the intrinsic meaning of camping in terms of landscape, architecture, and tourism [25]. In this Italian context, a particularly interesting example is the Villaggio Eni in Borca di Cadore, built between the 1950s and 1960s, which aimed to create a system of urban social planning. The settlement system developed organically, working in terms of the landscape to respect nature. The historical examples mentioned above allow us to codify three different approaches in tourist contexts [26].



Most commonly, campsites are studied and analyzed from an economic and management perspective, for which a substantial body of literature is available. From this standpoint, it is interesting to see how price analysis significantly affects the sustainability of camping. A study on camping tourism in the Costa Brava (northern Spain) identifies how the high variability in prices and seasonality of campsites in this area influences visitor numbers, defining their level of crowding [27]. Other research areas include evaluating tourists' perceptions of campsites in association with the quality improvement that these facilities have seen in recent years [28]. This type of research is beneficial for campsite managers to enhance their facilities based on observations and guest needs.

In the same research line, a study used questionnaires administered to campsite managers and tourists, with the former being interviewed and the latter responding to structured questionnaires [29]. The research has shown that guests' perception of campsite quality is linked to their choice of campsites, especially in the case of Croatian campsites, where the choice is influenced by the presence of a beach, the sea, safety, and the friendliness of the staff. Another area of research of particular interest concerns the impact of campsites (typically understood as places equipped for tents) on the soil and vegetation [30].

However, only recently has a portion of the research begun to address outdoor tourism from a design perspective, attempting to approach architectural design by providing guidelines for a conscious project definition from both a landscape and a human-nature relationship perspective, as well as from an environmental sustainability perspective [24]. There are indeed studies on ecotourism applied to campsite design, where the aim is to work on the impact of accommodation structures on the environment to make them as eco-friendly and integrated with nature as possible. The most relevant examples can be found in northern Europe where the design practices deal more on what concerns glamping, such as the 7th Room designed by Snohetta studio in 2017 in Sweden or the Forest retreat designed by Uhlík architekti in the Czech Republic in 2013. These examples demonstrate a great sensibility on the landscape trying to imitate nature and laying on the soil with lightness and respect.

However, more careful reflection on the maxi-caravan product within the tourism sector still needs to be considered. In fact, most of the latest example propose ecotourism linked to a specific architectural object as a unicum, without taking into consideration the development of open-air facilities that is wide spreading in the Mediterranean area such as campsites that have become a mass phenomenon.

While there is extensive research on campsites and minimal and mobile architectures, there needs to be an integrated approach to these two themes. In this sense, research appears divided into the components of open-air accommodation structures, and theoretical research progresses at a different pace than design research. This division is particularly evident when much of the research focuses on the economic and social aspects of the theme and its impacts.

This significant gap has highlighted a great opportunity for authors to define a new design approach combining theory and design by investigating case studies used as design references and examples of sustainability that become the new challenge for campsite design. Literature has been essential in understanding the elements that define these structures, defining opportunities and the resulting limitations that have constituted the challenge in the design process.

#### 1.4. Challenges for Outdoor Tourism

Since 2018, the AUDe laboratory within the Department of Civil Engineering and Architecture of the University of Pavia has dealt with sustainability applied to outdoor tourism. This research, in addition to numerous scientific publications, has produced the design of a maxi-caravan prototype and has given rise to an experimental design experience on the theme of campsite: Camping Design and Architecture.

Through the work of this design experience, which in a few years has developed more than 50 cluster proposals in different types of structures and landscapes, it has been found that open-air accommodation structures, regardless of their specificity, generated by landscape contexts of different types and different proposed lodgings settle, following comparable logics linked to the optimization of the usable space and little attention to the natural site.

The research work intends to demonstrate that diversified strategies concerning the site's specific features are the first step in approaching the issue of sustainability, placing the relationship with the prevailing landscape at the center of the debate.

The paper analyzes three case studies with different specificities located in three different geographical areas in terms of morphology, climate, and landscape. The study aims to demonstrate that using “personalized” and site-specific approaches for each context can guarantee a better intervention on the territory. Furthermore, from the point of view of the design of the space, it is possible to codify some approaches that can be generalized through direct experimentation and the design of some receptive areas or parts of them. The themes of density, the relationship with the plant and architectural context, and the use of natural environmental mitigation strategies are, among others, intervention systems that lend themselves to direct interaction with users or, instead, their explanation.

The interventions are applied to existing, regeneration, expansion or conversion structures and are characterized by a design approach by cluster (group of housing units, readable as a unicum and repeatable as a matrix on the territory. A cluster can host a variable number of units and people; its primary feature is recognizability), which modifies the context with specific attention to territorial, cultural and social characteristics.

Working on a small scale, with repeatable elements, can build comfortable and “didactic” or repeatable, sustainable landscapes. The goal is the construction of spaces in the city of tourism so that they can dialogue with tourists and the landscape that hosts them.

The use of artificial and vegetal elements, the integration of local vegetation, and the search for an architectural language are all necessary arguments for constructing these places according to the specificity of the context to which they belong. However, for the outdoor tourism sector to face the current environmental protection and sustainability challenges, it is essential to establish an agreement with the state institutions. These action strategies can support a change to establish a balance between the action of man and that of nature.

## 2. Design Thinking Methodology and Case Studies

### 2.1. Design Thinking Methodology

Three emblematic case studies have been selected in different Italian geographical contexts with different settlement peculiarities.

The case studies have been selected according to:

- different geographical context (seaside, lake, hill);
- different site-specific problems (wind, complexity of the morphology, biodiversity preservation).

Each case study demonstrates landscape design strategies that enhance and conserve existing nature. The common factor among the selected examples is the type of structure installed: for each project, removable units are considered, such as maxi-caravans and geodesic domes, which do not damage the ground as they do not have foundations and only need a connection to the water network and electricity already set up in the area. The proposed projects result from the work of Camp Design Architecture with the consultancy of the AUDe laboratory of the University of Pavia. The data and information were collected in 2022—after the pandemic period—through observation and interviews with campsite owners. The case studies contain intervention projects with the aim of enhancing the landscape and regenerating the present campsites.

Below, Figure 4 and Table 4 illustrate the position of campsites across Italian regions and the corresponding tourist traffic for the year 2022, respectively. This provides an insight into the scale and the dimension encompassed by the project.

**Table 4.** Case study number of arrivals and attendances for the year 2022.

	<b>Case Study 1: La Rocca Camping Village</b>	<b>Case Study 2: Spiaggia e Mare Holiday Park</b>	<b>Case Study 3: Agriturismo Fattoria La Palagina</b>
<b>2022 number of arrivals</b>	36,000	22,016	18,272
<b>2022 number of attendances</b>	240,000	182,488	Not available



**Figure 4.** Italy map with the location of the three case studies: La Rocca Camping Village—78,000 m<sup>2</sup> (Lake Garda, Veneto); Spiaggia e Mare Holiday Park—98,000 m<sup>2</sup> (Emilia-Romagna); Agriturismo Fattoria la Palagina—22,000 m<sup>2</sup> (Toscana).

## 2.2. Case Study 1: La Rocca Camping Village, Veneto

The first case study concerns the intervention inside the La Rocca Camping Village on Lake Garda.

Lake Garda is a highly frequented tourist destination, especially by northern European tourists. There were about 10 million visitors in 2022 [31]. The conformation of the lake is such that most open-air accommodation facilities develop homogeneously. Mountains or mountain ranges surround the lake. This feature has determined the management of the infrastructures around the lake and, in particular, the road network that develops with a main road that follows the circumnavigation of the lake. This ring determines the development of urban centers and accommodation facilities' positioning.

These, in their development, have to deal with the infrastructural limit. This limit determines the size of the campsites, always small, especially when compared with similar structures but in coastal contexts.

La Rocca Camping Village is located on the slopes of the Rocca di Garda, a mountainous relief overlooking the lake, which represents a protected landscape area partially used agriculturally for the production of wine. Olive trees and cypresses characterize the characteristic nature of this area.

Concerning the infrastructure, the accommodation facility straddles the boundaries, using the limit to distinguish the camping areas into two main sectors: the side between the road and the lakefront is intended for camping or to host tourist property. In this sector, there are also the common services, the restaurant, the SPA with swimming pool, and other services (supermarket, internal shops, mini club). On the other hand, the sector behind the infrastructure is intended for a village, i.e., using only structures owned by the campsite, maxi-caravans, and lodge tents, i.e., large tents with wooden structures and equipped as if they were holiday homes, with the addition of some common services such as the swimming pool and some sports areas.

The village sector is characteristic of the settlement relationship with Lake Garda because it develops on sloping land developed with a system of steps or terraces, a solution of agricultural origin adopted to make areas characterized by a significant slope cultivable.

There is a final area behind the tourist village, which develops in an excessively steep area and for agricultural use, not accommodation, and which houses an educational farm with fences arranged on the cliffs and inhabited by animals of various kinds (sheep, goats, alpacas, parrots, and donkeys).

The internal landscape of the accommodation facility is affected by a multiplicity of solutions, which follow different logic. The whole area is subject to landscape restrictions, a form of protection reserved for specific areas or buildings with a particular historical or environmental significance

[32]. The landscape is recognized as an asset to be protected and respected. The coexistence of anthropic and natural elements codifies a characteristic aesthetic system binding to the design.

The insertion context is therefore characterized by a strong naturalness, typical of the lake context with cypresses (*Cupressus*) and olive trees (*Olea Europaea*), and a morphology characterized by changes in altitude and terraces that rise towards the Rocca di Garda. The proximity to the state road represents the only threat to noise and potential environmental pollution of the accommodation facility.

The area involved in the project is located in a privileged position to the rest of the camping, as it is close enough to the services to be able to use them comfortably, but at the same time at a high enough altitude to enjoy a panoramic view of excellent quality and without interference.

The choice to work on the “Glamping theme” (Glamping: Glamorous Camping, is a new type of luxury accommodation favoring connection with nature and combining comfort, sustainability, and adventure) is conditioned by the morphology of the land itself, which presents a sequence of small terraces and does not allow the insertion of a large number of units.

We, therefore, choose to work with a few housing units, raising their comfort level by opting for an immersive approach in the existing nature.

The project, therefore, starts with a survey of the terraces, their sizing, and the position of the existing vegetation. Then, following the morphology, the system of terraces makes it possible to enhance the view towards the lake, even in distant positions.

The project sees the succession of two phases. The first phase tries to work with the maxi-caravan object. Maxi-caravan has minimum dimensions ranging between three and four meters and variable lengths. The existing landscape consists of three terraces with an elevation difference of approximately two meters between each level. The existing terraces have a maximum width of 3.5 meters and a minimum of three. Therefore, the sizing of the housing units allows for installing a maximum of five units spaced apart.

The first proposal provides for the organization of the houses and their private appearances in line with the steps. The units would have been made with two blocks placed side by side in the center of which the veranda would have been built. In this way, it would have been possible to optimize both the size of the terrace and its trend, which follows the morphology of the rock and is, therefore, slightly non-linear.

The use of the external space of the house is essential. The maxi-caravans are industrially produced as a complete object without pertinent external spaces. When they are installed, the accommodation facility usually endows them with a veranda or, instead, a contiguous space protected from sun and rain.

The veranda is often the transitional space that mediates between the private dimension of the house and the collective dimension. In Glamping, the terrace, or outdoor space, aims to have the same level of privacy as the internal domestic dimension.

The positioning of the veranda in the middle of the bodies of the mobile homes would therefore have allowed an immersive experience also in the external space, experiencing nature in a privileged way.

The typological image of reference is that of the house by the lake, which develops precisely using the steps and which uses them to enhance the perception of the lake itself.

From a technical and material point of view, in addition to enhancing the landscape, the decision was made to push towards the sustainability of materials, both in the house and the outdoor space.

The work on the maxi-caravans starts from the prototype created with the AUDe laboratory, modifying the facade cladding for a more natural solution. First, a cork covering was chosen, a natural and completely recyclable material.

Regarding the construction of the external landscape, we want to work by finding solutions compatible with the context and solving the problem of the paths, which must resolve the differences in height. The terraced system has its connection system, still linked to the agricultural use of growing olive trees, which provides for the geometric conjunction of some cliffs at their ends, generating a sort of continuous path. However, this path does not match the isolated settlement system of the units, so an intermediate solution is identified. The existing path is enhanced using rammed earth and concrete because they are highly draining and compatible. However, a new path is also created, which crosses the terraces and is resolved with a staircase. This staircase is made with used sleepers embedded in the ground. This material, derived from waste from rail-

way lines, is treated so as not to be harmful. The technical solutions developed for the construction of the veranda coherently follow what has been explained for houses and landscape: wood is proposed for the bases, and roofs made with disused sails used for naval use, also regarding one of the traditional activities on the lake.

The initial project also envisaged the sizing of the solar panels for the supply of electricity to be positioned on the roof of the units. The roofing of the maxi-caravans had therefore been suitably sized to safely house a sufficient number of solar panels to produce 6 kW, the electricity required for a maxi-caravan also equipped with a Jacuzzi.

Due to contingent needs, a projected variant was implemented that replaced the maxi-caravan housing units with alternatives of the same size but similar to the glamping theme: four geodesic domes and a transparent spherical tent were installed.

Although the material sustainability of these units is lower than that of maxi-caravans, their compatibility with the landscape remains very effective thanks to their complete and rapid removability. The curtains are placed on a wooden base.

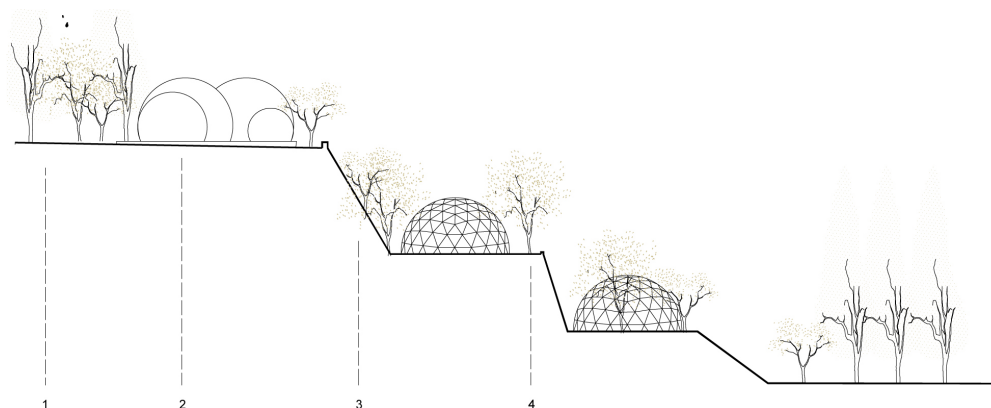
In its completed phase, the project sees an area of about 1500 m<sup>2</sup>, which houses five special units: a bubble for two people and four geodesic domes for two/three people, guaranteeing overall isolation (Figure 5).

The study and planning of insertion into the landscape were carried out as planned, demonstrating an important assumption. Beyond the choice of the housing system, the design approach compatible with the context makes it possible to enhance the landscape without impacting it. There has been no modification of the cliffs and vegetation, nor has any modification of the image of the landscape. This has allowed the housing units among the olive trees to offer an immersive experience that enhances the natural system (Figure 6).

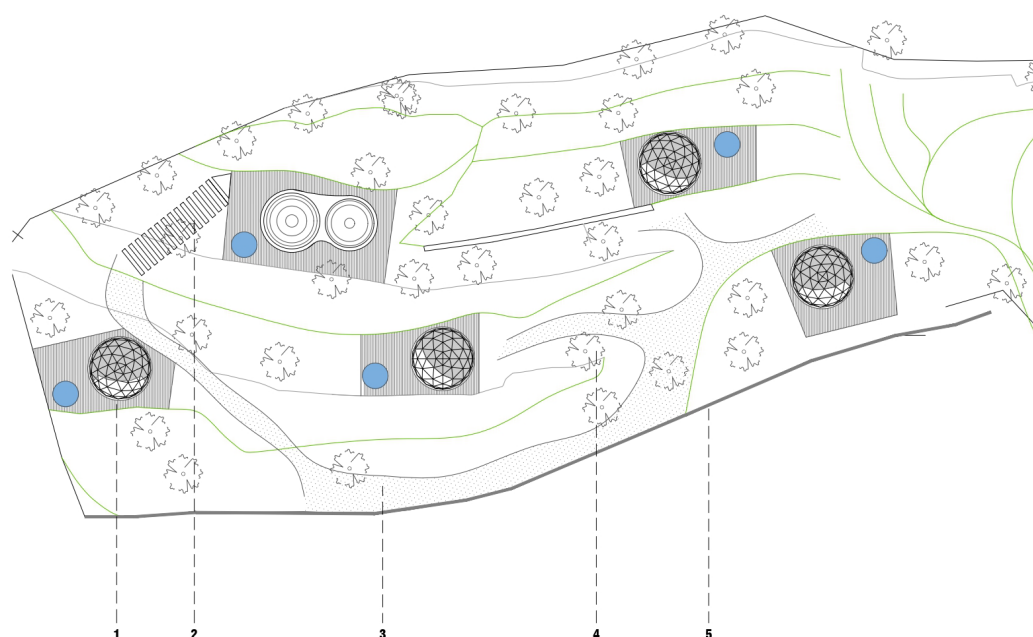
Their prevailing transparency generates a sense of total immersion, prompting one to appreciate nature in its forms at every moment of the holiday without renouncing the comforts of the accommodation facility. The study of lighting also favors the use of low-emission LEDs along the stairways: a luminous path up to the entrance of each unit, a clear but slight sign for orientation in the space. To improve night visibility without interfering with light pollution. A phosphorescent paint applied to the trunk of olive trees was also proposed as easily removable and not harmful in terms of emissions. Once the installation was completed, it was decided not to apply it because the presence of the LEDs was sufficient to safely reach the housing units, guaranteeing an amplification of the immersion in nocturnal nature.

Integrating the new glamping system into the surrounding landscape takes place without substantial alterations to the visual impact; looking out from the mountain behind, the presence of the new units is almost imperceptible. The glamping village, seen from above, appears as a sector halfway between the futuristic and the vernacular. The glamping space becomes an isolated and identifiable compartment; access is allowed only to guests and insiders. The area is wholly pedestrianized; vehicular access is not allowed, which would undermine the sense of peace and isolation.

The settlement system adapts entirely to the landscape, placing the natural element in the foreground without modifying it but adapting to its limits. The morphology of the land imposes the typology of the settlement system, as in prehistoric villages or vernacular housing systems. In this way, a balance is found between the anthropic footprint and the natural presence, which can be read as a founding act of a sustainable approach to camping and glamping.



**Figure 5.** Settlement system architectural section—1. Existent trees (*Pinus Pinaster*); 2. Living pod; 3. Existent slope; 4. Existent tree (*Olea Europea*).



**Figure 6.** Settlement masterplan—1. Geodesic dome; 2. Used sleepers; 3. Rammed earth and concrete path; 4. Existent tree (*Olea Europea*); 5. Limit from the rest of the camping.

### 2.3. Case Study 2: Spiaggia e Mare Holiday Park, Emilia-Romagna

The second case study concerns the conversion of an area of the Spiaggia e Mare Holiday Park campsite in Porto Garibaldi. This accommodation area is located on the coast of Emilia-Romagna, in one of the Italian areas with the greatest tourist attraction. The “Riviera Romagnola” extends from Rimini to Ravenna for 91 km of coast, represents one of the most important and extensive seaside areas in Italy, and is characterized by strong urbanization, mainly touristic, almost defining a long coastal city with a few moments of discontinuity. Nevertheless, from the end of the Second World War until the end of the 80s of the 20th century, it was the protagonist of a remarkable flowering. Along this coast, in addition to the foreseeable problems of over-tourism with its consequences, a problem of erosion of the sea coasts has been detected, linked to climate change. Therefore, the climate theme becomes the key element of this project.

Spiaggia e Mare Holiday Park covers an area of about 11 hectares, divided into three large sections: one directly connected to the landscape system of the equipped beach and the sea, which houses maxi-caravans of various kinds, a second section behind the first, not contiguous to the beach but connected through orthogonal paths to the sea, and the last left to free pitches to allow the occupation by tents, caravans and campers. The redevelopment of a portion of the accommodation area contiguous to the main landscape system, the beach, passes through a re-semantization of the soil and the natural environment and the integration of the mobile units with the landscape.

The project area is already occupied by maxi-caravans and is positioned in an orthogonal and massive way to optimize land use. The houses have a particular shape; they develop on an almost square base with an external space inside the volume of the house itself. This solution is probably always linked to optimizing space to ensure privacy by placing the housing units very close to each other. The area is partially suitable for vehicles, and the houses are spaced about two meters apart. There are local trees typical of this coastal strip. This line of trees also represents a long protective edge towards the sea. A survey and comparison with the property revealed the problem of a prevailing wind, the Scirocco coming from the sea, which generates severe deterioration in the installed maxi-caravans. Despite the compact settlement system, the houses are affected by the climate, and the wind is not stopped even by the trees planted on the seafront, which limits the visual perception of the prevailing landscape. In addition to logistical issues, environmental issues add up; with its erosive action, the wind risks jeopardizing the conservation of the coasts, shortening the beach in its extension. The project involves the construction of a sector of 14 maxi-caravans organized in an area of approximately 4200 m<sup>2</sup> (about 300 square meters per pitch) to build the landscape to compensate for the effect of the wind while remaining sustainable and compatible with the prevailing landscape.



Two priority strategies are therefore identified: to compensate for the wind's effect and enhance the coastal landscape's presence.

Given the climatic characteristics of the Porto Garibaldi area in Emilia-Romagna, the search for environmental comfort in the open space passes through a double approach: the first concerns the search for landscape solutions that build a new compartment inside a complex and already very established; the second concerns the definition of passive wind control strategies, through the arrangement of maxi-caravans and vegetation.

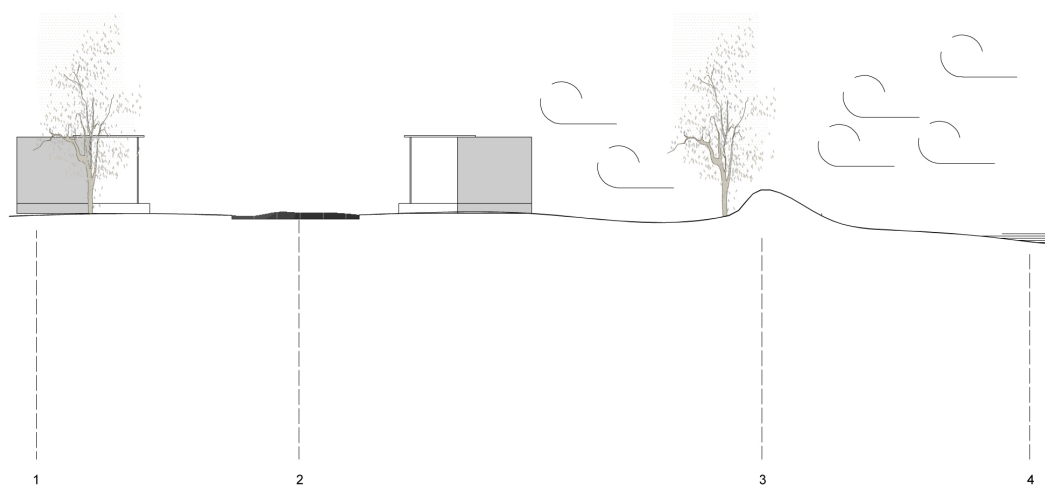
First of all, we work with the wind. It was decided to use the houses as a windbreak element to avoid building real barriers. A perpendicular orientation is therefore defined as the prevailing direction of the Scirocco, which is approximately 45 degrees concerning the alignment of the coast. In this way, the houses, which can be developed with small openings on one side, concentrating the glazed surfaces on the opposite one, make it possible to protect the open space by protecting the most sensitive built areas, i.e., those of the verandas (Figure 7). The verandas are developed on the opposite side to the wind, therefore protected. The maxi-caravans are organized in small clusters of three units. The units are opened toward the cluster's center to give the clusters a specific external scope (Figure 8). However, keeping the wind defense effect as a priority, two units are placed on the seaward side and only one on the opposite side. In this way, the units define a windproof wall that protects the open space and the entrance of the third unit [33]. A system of empty spaces is obtained by repeating this matrix, which defines the new compartment. Cars are left on the sidelines in order to pedestrianize the area. The relationship with the prevailing landscape in this way is obviously sacrificed from a perspective point of view; this is because the view of the sea is lost. Also, again to protect from the wind, the vegetable curtain is reinforced to protect the beach's edge. It was decided to build a new landscape to enhance the presence of the sea, which maintains the values of sustainability in the materials and adapts to the cluster conformation. The choice of materials for the new paths is always aimed at sustainability; the avenues connecting the housing units to the beach and the rest of the camping are made of reclaimed sleepers. Always with a view to compensation and the environment, it was decided to maintain the existing vegetation, supported by the insertion of new essences chosen from the native ones, specifically designed for regional indications. Finally, the "beach" space is multiplied by creating a sequence of islands within the camping enclosure to form small private atolls in front of the houses. These spaces are developed as appurtenant areas of the clusters, equipped with wooden structures to allow their use. In addition to the solarium/relaxation areas, two functional areas have been added: a play area for the children and one with outdoor training equipment.

These settings function as a replica of the coastal landscape, going to unload the human weight of use of the coasts, generating the problems already mentioned common to this region. This compensatory strategy acquires even more value if one considers that regional legislation usually imposes a distance from the coast of 300 meters to construct buildings. To date, maxi-caravans do not fall within this limit due to their removability, but local administrations still tend to ask accommodation facilities not to install maxi-caravans near the coast. Therefore, if we read the construction of the landscape in a temporal strategy, the designed campsite clusters can become the matrix for the maintenance and conservation of the portion of the campsite next to and of the coastal strip today for hospitality use and in the future for naturalistic use. Adding value to this landscape is the presence of historical anthropic elements. For example, the area hosts an artifact from the Second World War, a defensive bunker in reinforced concrete. This historical element is inserted in one of the clusters (built around it), transforming it into a new point of attraction for the new area and the entire campsite, including it within another tiny sandy atoll.

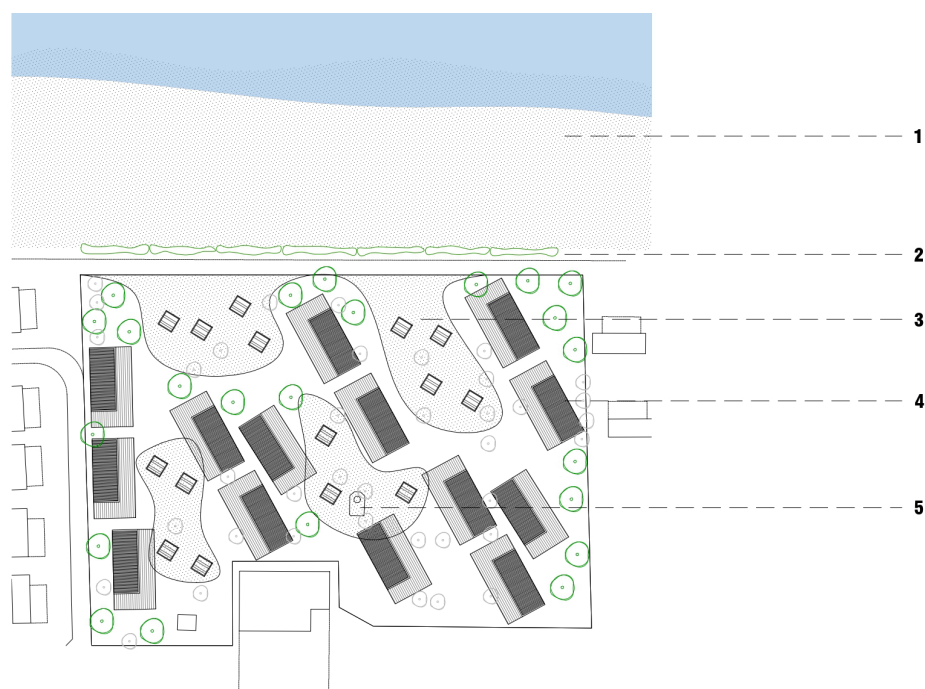
The construction of the landscape of the camping cluster, therefore, starts from the reading of the natural and climatic peculiarities of the site. To respond to the critical issues, a solution has been found capable of building a landscape that is protected but usable by the user. The climatic aspect determines some choices concerning the settlement system. The result is a fragmented but homogeneous landscape, which seeks the dominant language of the landscape in its founding elements: sand and plant essences. The acceptance and reading of the conditions and limits imposed by some natural conditions allow for solutions that safeguard and enhance the prevailing landscape and that inside the camping. Transforming the wind problem into an opportunity to preserve the beach affected by erosion and intensive use in the high season is the key strategy of this intervention. The settlement system of the mobile home adapts to the landscape, understood in its complexity and, therefore, its climatic component. In this way, an anthropized



landscape is generated but integrated with the existing one, which takes up its characteristics without sacrificing its meaning and without losing the characteristics of its primary function, playful and receptive [34].



**Figure 7.** Settlement system architectural section—1. Living unit; 2. Internal sand landscape; 3. Natural sand landscape; 4. Prevalent landscape (sea).



**Figure 8.** Settlement masterplan—1. Prevalent landscape (sea); 2. Trees line; 3. Internal sand landscape; 4. Maxi-caravan; 5. Second World War bunker.

#### 2.4. Case Study 3: Agriturismo Fattoria la Palagina, Toscana

The Tuscan landscape is one of the world's most famous and iconic Italian landscapes. Among the seven sites included in the Unesco Heritage (1982), there is also the landscape of the Val d'Orcia. "The territory mainly made up of a hilly landscape with gentle shapes and slightly accentuated valley incisions, called clays, includes places and monuments of historical and artistic importance such as the Rocca di Tentennano in Castiglione d'Orcia, the Fortress of Montalcino, the Fortress of Radicofani, the thermal baths of Bagno Vignoni and Bagni di San Filippo and various museums, among which the Civic and Diocesan Museum of Sacred Art, the Brunello Museum and the Glass Museum in Montalcino, the Diocesan Museum in Pienza stand out" [35].

In 2021, the procedure was launched to include the Chianti area, between Florence and Siena, in the UNESCO Heritage. Among the signatories of the request are the Regional Council, the Tuscany Region, the Chianti Municipalities, the Chianti Classico Wine Consortium, and the

Foundation for the protection of the Chianti Classico territory. This region of Tuscany is characterized by a solid agricultural value, mainly linked to the cultivation of vines. The hills are widely used for this cultivation, and human settlements and farmhouses fit coherently into this anthropized natural dimension.

Agriturismo Fattoria la Palagina is located in this region. The main body of the accommodation is defined by a rural house surrounded by trees and immersed in the agricultural landscape of the vineyards. Faced with the need for expansion, the accommodation service was integrated with a cluster of maxi-caravans that would occupy completely free land alongside the existing structure.

The land is slightly sloping and inserted in the landscape system described, with a coast road accompanying its development and a panorama defined by vineyards and woods. The project involves the installation of a few housing units, with the possibility of future expansion. It is therefore defined to work with the land's orography, using the existing slope as a design gradient that defines the construction of the landscape (Figure 9).

The reference landscape is the productive agricultural one of Chianti. For this reason, some elements compatible with the housing dimension are considered:

- orchards (local, typical, defined);
- vineyards;
- home-sized vegetable garden.

Biodiversity is a central theme in the sustainable development of places, mainly agriculture. As explained by Gianfranco Bologna, scientific director of the WWF's sustainability area, "The rate of global biodiversity loss is increasingly worrying the international community. Biological diversity is in fact represented by the current situation of wealth in which life on our planet manifests itself." [36] In agriculture, the reference for biodiversity is the genetic variation in the plants we grow and in the animals we raise for food and fiber. The project aims to bring the theme of biodiversity not only on its actual level but also on an "educational/cognitive" and an "aesthetic/linguistic" level. Constructing a complex system determined by the juxtaposition of native species linked to agriculture is an opportunity to define a "manifest landscape" of the entire Chianti region. At the same time, constructing a landscape aesthetic linked to the agricultural language becomes a means of communicating the tourist experience. The project, therefore, proposes a syncretic vision of the agricultural landscape, understood in its hybridization between natural and artificial. Naturally, both elements refer to the product, but they do so according to the qualification of the space and the holiday experience.

The system of outdoor spaces is then resolved together with the housing system, generating a coherent unicum of architectural sequences:

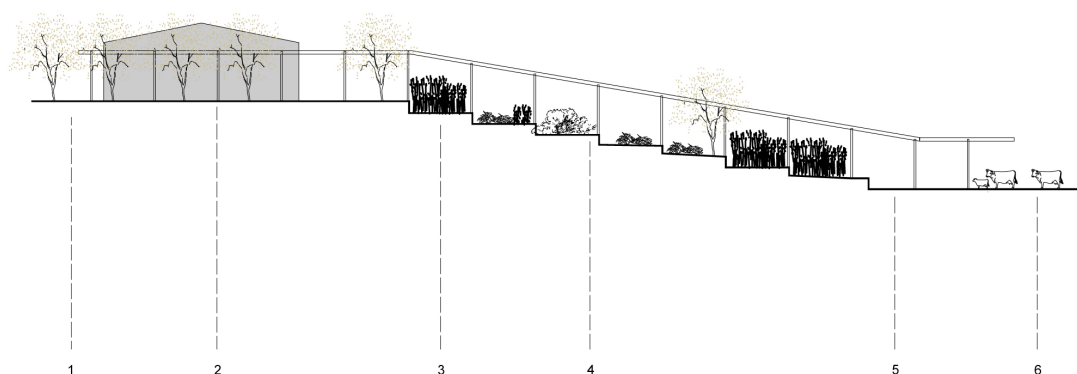
- the house is the starting point of a landscape itinerary that develops following the natural slope of the area, encountering different micro-landscapes that generate different spaces while remaining within the agricultural aesthetics;
- the inhabited void of the veranda of the house gives way to a dense system, that of the vineyard and the orchard, to which the average densities of the vegetable gardens and botanical gardens respond, integrated with the pergola system which determines a sign of order in the development of the agricultural biodiversity (Figure 10).

Residential architecture linked to the agricultural world in Italy often uses technical systems as spatial elements. In northern Italy, this is the case of the porch of the barns and stables, which in addition to having a specific function linked to the drying of feed and the protection of animals, becomes a characterizing space of rural architecture. Working with a less massive housing dimension, a technical element linked to the territory that can have this ambivalence is identified and found in the "pergola".

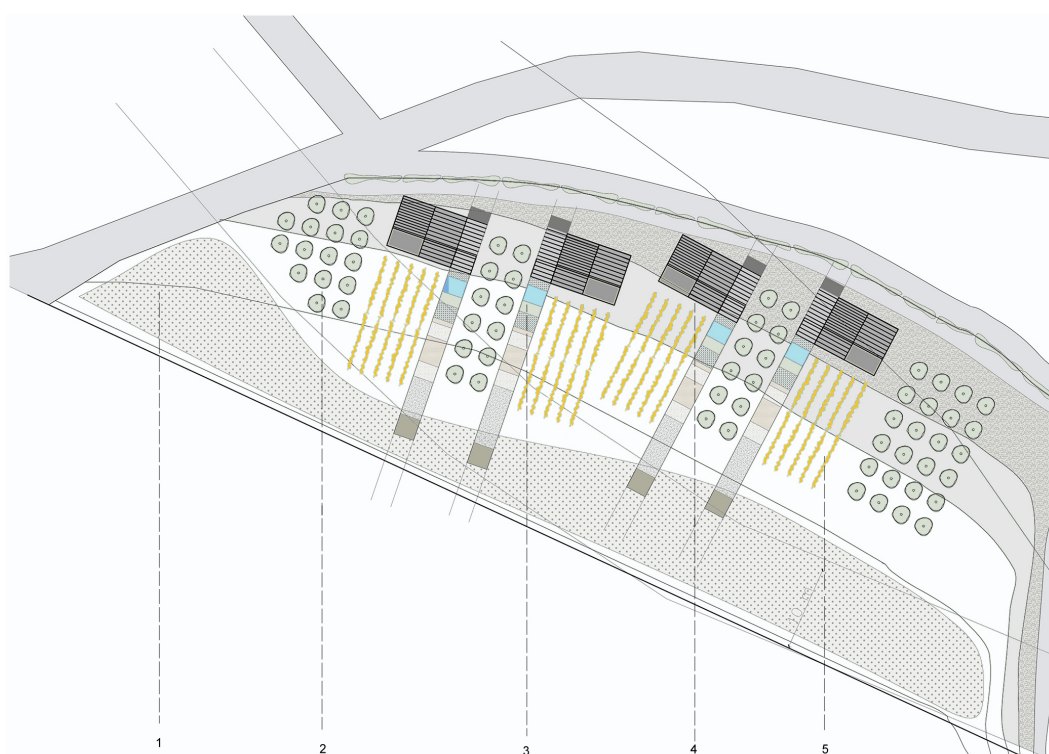
If the maxi-caravan, designed with a language similar to the local one, with a double-pitched roof, is equipped with its veranda, or rather a protected open space linked to the domestic space, the pergola is studied as an element of the landscape. This shading system, which is also used to grow climbing plants, is developed linearly for each housing unit. The installed maxi-caravans all face the valley, where there is the best orientation and the best view. The pergolas follow the slope, positioned on a system of light terraces that host various activities. They also contain a sequence of micro-landscapes, ranging from the living dimension (lounge seating) to the luxury

dimension (private whirlpool tub) to the agricultural one: vegetable gardens with different essences and botanical gardens (with medicinal herbs and fruit trees). Finally, a private access path is developed under the pergola, which connects each house to the lower part of the area. In this position, to complete the reference to the Chianti agricultural landscape, an enclosure with animals (sheep, goats, and cattle) is proposed, which defines a sort of meeting place.

The agricultural dimension, with all the plant and animal varieties, insists on the landscape referring to the value of biodiversity. Therefore, an experiential, informative didactic approach is proposed by combining this reality with the domestic one, even if it is special, like that of outdoor tourism. The beauty of the landscape is declined in its technical varieties, and the dimension of the holiday finds value in the knowledge of the place, whose culture passes through the enhancement of the peculiarities of the territory, not only architectural ones. Sustainability is not just a matter of efficiency or environmental compensation but an act of knowledge and conservation.



**Figure 9.** Settlement system architectural section—1. Orchard; 2. Pergola; 3. High vegetation green garden; 4. Low vegetation green garden; 5. Passage; 6. Animal space.



**Figure 10.** Settlement masterplan—1. Animal Space; 2. Orchard; 3. Low vegetation green garden; 4. Vineyards.

### 3. Results and Discussion

To draw a parallel between the three case studies proposed, a comparative table (Table 5) was created, containing a series of parameters divided into topics, which refer to the different degrees of intervention and the multiple design strategies applied by the three projects.

The table allows the development of reflections on a large scale and in a more general way, highlighting the opportunities and peculiarities of the potential insertion sites of a camping or a tourist village. Summarizing the analysis of the parameters, it is possible to determine guidelines applicable in other contexts and disclosed in the sector. Both environmental and identity themes are well expressed in the three case studies. The parameters that show a more relevant gap in the project definition are morphology, soil use, and sustainable materials. Regarding morphology, in case study 2 the impact of orography hasn't been relevant to the definition of the project due to its own nature. Indeed, the natural landscape doesn't show any particular aspect, it is mostly flat, if not from the sea and sand presence. In case studies 1 and 3 the impact of morphology on the designing phase has been of greater relevance due to the presence of hills that make the landscape more variable and interesting. This fact also explains the difference between soil use parameters between case studies 1, 3 and 2. The particularity of La Rocca and Figline Valdarno landscapes has pushed the projects towards a lighter approach, such as inserting a lower number of mobile homes defining what is so-called glamping. Biodiversity parameters show a similar approach to all of three projects, but particularly in Case study 3 attention has been paid more thanks to the presence of a relevant agricultural landscape in which it was possible to enhance this context within the campsite introducing this aspect in a smaller scale. Regarding identity only case study 3 doesn't show any approach to the use of sustainable materials. The designing approach to this case study has been indeed more focused on the agricultural landscape as a way of introducing sustainability in the campsite and for this reason, it is the case that is more sensible to the landscape language, taking the traditional agricultural landscape of Tuscany and implementing and replicating it into the campsite. All case studies work on heritage, specifically with vegetation. Both case studies 2 and 3 implement local plants and trees inside the campsites, in one case to face wind problems in the other introducing local hortus. In case study 1 there's no implementation of biodiversity because of the high presence of animals and vegetation in the original site, thus there have been maintained all trees inserting a maxi-caravan in between vegetation offering tourists a complete immersive experience.

**Table 5.** Description of the parameters and evaluation scale—**Morphology:** impact of the orographic and topographical characteristics of the existing soil in the design choices (“++” fundamental, “+” significant, “−” irrelevant); **Soil/land use:** modification of the existing soil for planning purposes (“++” construction of a new landscape, “+” integration of new elements alongside existing ones, “−” maintenance of the existing situation); **Biodiversity:** preservation and integration of biodiversity in the project (“++” implementation of biodiversity; “+” maintenance of existing biodiversity; “−” reduction of biodiversity); **Landscape language:** relationship between the construction choices of the internal landscape with the prevailing landscape (“++” imitation of the prevailing landscape; “+” replication of some significant elements of the prevailing landscape; “−” construction of a new landscape); **Sustainable material:** material choices linked to the principles of sustainability: recycled, natural, recyclable, water drainage, LED lighting (“++” very sustainable; “+” partially sustainable; “−” not very sustainable); **Heritage:** integration and consideration of the existing plant and architectural heritage in the project (“++” integration and valorization; “+” integration and hybridization; “−” replacement).

Topics	Parameters	Case Study 1	Case Study 2	Case Study 3
ENVIRONMENT	morphology	++	−	+
	soil use	−	++	−
	biodiversity	+	+	++
IDENTITY	landscape language	+	+	++
	sustainable material	++	+	−
	heritage	++	+	++

Through the three case studies, we have also been able to define graphically the different landscapes and to understand the peculiarities of each case study defining three different design approaches based on the different contexts. This kind of approach abroad the possibility to be adopted also in different contexts based on landscape, soil, vegetation, and climate.

#### 4. Limitations and Future Possibilities of the Research

Since 2018, when research on outdoor tourism began, the study has focused on the role of the maxi-caravan as an industrial product in the construction of campsite landscapes [37].

With the advent of the pandemic, this type of research faced some limitations; however, the study has intensively concentrated on the possibility of adapting the tourism sector to the new

pandemic-related regulations. During this period, the AUDe laboratory has developed a document [38] promoted by the Italian association FAITA, outlining a series of guidelines useful to campsite owners for adapting their facilities to the new restrictions, thereby allowing them to remain open. In fact, Italy has been the first Western country to face a pandemic through hard restrictions in public spaces [39]. For this reason, the accommodation facilities need to be prepared for the summer season to respond to procedures defined by the government. In the document, there have been developed a series of addresses for a safe holiday in open-air facilities during the spread of COVID-19.

With the easing of COVID-19 restrictions, the influx of tourists towards this type of tourism has significantly increased. The laboratory, together with Camping Design Studio, has begun working intensively on the design of expanding accommodation structures, taking advantage of the opportunity to address sensitive topics such as landscape and sustainability. This paper presents a portion of the research conducted during this period.

The primary limitations encountered in the course of our research pertain to the collection of statistical data. Obtaining consistent and continuous information has proven to be challenging. The main difficulties encountered include:

- Discontinuities in historical data series from one year to the next;
- Temporality and timeliness of the data, meaning the latest year or period for which the information is available. As of the time of writing, the Istat data extends to the previous year, but more recent provisional aggregated data is also accessible.
- Granularity of the data, which corresponds to its availability at a higher level of detail in terms of geographical coverage (e.g., region, province, municipality, or individual accommodation facility).
- Changes in tourism classification, with updates to the NACE-ATECO code undergoing a revision set for release in 2025. This revision alters the categorization of tourist villages, adding complexity to the data interpretation [8].

Another aspect that has strongly limited research and the design process is the need for more literature focused on the architectural design of open-air accommodation structures. While there is ample literature on tourist facilities, there needs to be more architectural reflection on the design of this type of structure (settlement system). Literature on open-air accommodation facilities remains theoretical, related to tourism strategies from the economical point of view, almost never delving into the architectural or landscape design.

Regarding future research possibilities, case studies like those presented in this paper on design approaches about landscape design in relation to open-air tourism can be extended to further geographical areas: along the Mediterranean, in mountainous regions, and so on. This can allow for future design discourse linked to a specific geography, enabling the definition of design guidelines that vary according to the reference context.

## 5. Conclusions

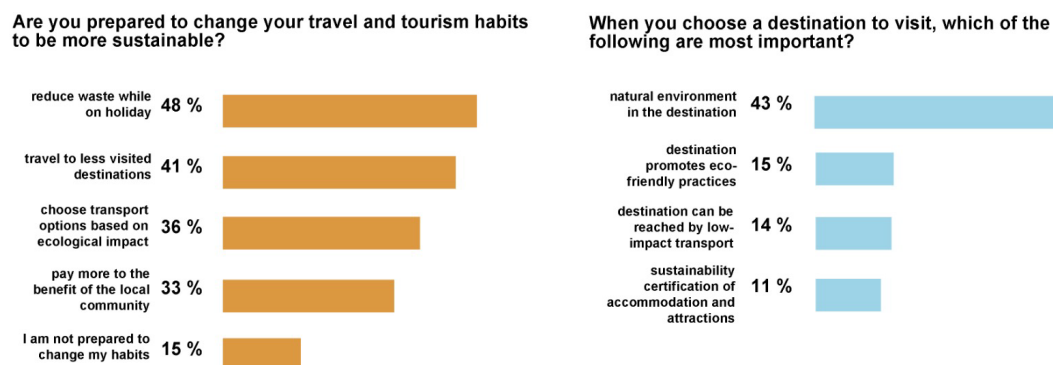
Italy has been one of the countries hardest hit by COVID-19, with 1.5 million people infected [40]. However, the disease became less severe as the summer approached, during which it is presumed that the virus lost much of its lethality [40]. This factor was of utmost importance for the survival of open-air tourism. As mentioned, accommodation facilities begin to prepare for the new season through guidelines in the March to June period. The possibility of enjoying an outdoor vacation was the determining factor in the growth of this type of tourism, which, compared to regular accommodations like hotels, offered tourists greater protection from the virus. This favored the choice of this form of tourism by a more significant segment of the population, who were not only seeking safety but also more sustainable forms of tourism, in which a strong relationship between the theme of sustainability and that of healthiness is clearly evident.

The pandemic provided a significant opportunity for these facilities to undergo renewal and improvement while paying greater attention to sustainability issues, such as environmental preservation and visitors' well-being. In this regard, the landscape theme is closely related to the issues brought about by COVID-19, increasing the awareness and sensitivity of campsite owners.

It is evident how the theme of sustainability is becoming increasingly widespread, not only among campsite owners but especially among tourists. Through a questionnaire administered to 25,714 people (Figure 11), it is clear that ecological impact and waste reduction are predominant



themes among tourists when choosing their holiday destination, in addition to growing preferences for the presence of natural environments. Tourists' preferences are essential to understand the direction in which accommodation facilities should develop in order to meet their needs.



**Figure 11.** Social statistics relating to sustainable and eco-tourism—based on questionnaires given to 25,714 people. Eurobarometer (<https://europa.eu/eurobarometer/surveys/detail/2283>).

Talking about landscape in Italy and Europe means considering the complex system of anthropic and natural signs that define the cultural, physical, real, and induced horizon. Moreover, the different interpretations of the Landscape make explicit two interrelated conditions: on the one hand, the physical elements that make up the habitable space: trees, buildings, infrastructures, buildings; on the other, the symbolic elements that belong to a particular place or a specific image: pine forest, beach cabins, cypresses. Therefore, the Landscape has the peculiarity of not representing a single category of elements but being the formal aspect of all of them together: the anthropic, the geographical, and the natural.

Through the three case studies, we intend to promote a culture of camping design that is respectful of the peculiar characteristics of the place and capable of defining site-specific settlements. The result is an aptitude for simultaneously considering the soil, the vegetation, the accessory elements, and the housing units in the project as tools to strengthen and characterize the Landscape. The analyzed parameters of morphology, land use, biodiversity, Landscape, sustainability, and heritage specify these aspects.

In all three cases, the starting point is the definition of the soil; in Veneto and Tuscany, to respond to the predominantly agricultural Landscape, and in Emilia-Romagna, to counteract coastal erosion. The archetypal references are the lake house, expressed by the veranda, which summarizes the idea of the porch typical of Venetian villas; in Emilia-Romagna, the consolidated idea of camping near the sea is strengthened, while in Tuscany, it is the rural building with the pergola.

In the three cases, overall landscapes and micro-landscapes are created. The overall landscapes are based on the geography of the places; the micro-landscapes instead constitute the domestic dimension defined by the articulation of housing structures, accessories, and plant elements in which artifice and nature find their balance.

The low density of choices that bring camping designed closer to the idea of glamping also goes toward countering over-tourism, that phenomenon of human overcrowding linked to tourism, which affects the environmental impact through the production of CO<sub>2</sub>, waste, and more. Therefore, by building accommodation systems that are more integrated with the environment and reducing the number of presences (but qualifying the proposed service), we would reduce the environmental impact linked to the mass of tourists. Furthermore, by partially freeing the accommodation structures from the prevailing Landscape and building quality internal landscapes, it could also increase the time of use of these places, also in favor of longer tourist seasons, offering higher quality and promoting a new economy of tourism no longer tied to the summer period.

Qualifying the internal Landscape of open-air accommodation facilities would also positively affect the Tourist Gaze's effect. The phenomenon studied by Urry [17] relating to tourist expectations, often linked to images of the place and not of the structure, would be compensated by a qualification of the structure according to its greater affinity to the context. Living inside the accommodation facility would coincide more with living in the local Landscape, which attracts tourists. For these reasons, the evolution of this research is to promote the Landscape through a

design practice that combines industrial production and site design. The work on the language of the mobile units, possible only through dialogue with the companies that make them, can thus merge with that on the context and nature, thus arriving at a general integration into the project, the only way to support a new landscape for outdoor tourism.

### Data Availability

Data are available on these websites:

- <https://www.campdesign.it>
- <https://aude.unipv.it>

### Author Contributions

Conceptualization: L.T., & C.B.; Data curation: M.C.; Formal analysis: L.T., & M.C.; Funding acquisition: L.T., & C.B.; Investigation: M.C., & L.T.; Methodology: L.T., & C.B.; Project administration: L.T.; Resources: M.C.; Software: M.C., & L.T.; Supervision: L.T., & C.B.; Validation: L.T., & C.B.; Visualization: L.T.; Writing – original draft: M.C., & G.N.T.; Writing – review & editing: G.N.T.

### Conflicts of Interest

The authors have no conflict of interest to declare.

### References

- Lucivero, M. (2015). Il paesaggio del camping nella storia: dall'impatto zero alla colonizzazione intensive (in Spanish). *QRU: Quaderns de Recerca en Urbanisme*, 5/6, 204–213.
- Bell, S., Tyrväinen, L., Sievänen, T., Probst, U., & Simpson, M. (2007). Outdoor Recreation and Nature Tourism: A European Perspective. *Living Reviews in Landscape Research*, 1, 2. <https://doi.org/10.12942/lrlr-2007-2>
- Vourdoubas, J. (2019). Carbon Neutral Campsites Due to Operational Energy Use in the Mediterranean Region: Are they Feasible? *American Scientific Research Journal for Engineering, Technology, and Sciences*, 60(1), 202–211.
- Trillo, C. (2003). *Territori del turismo. Tra utopia e atopia* (in Italian). Alinea.
- Gossling, S., Peeters, P., Ceron, J.-P., Dubois, G., Patterson, T., & Rishardson, R. B. (2005). The eco-efficiency of tourism. *Ecological Economics*, 54(4), 417–434. <https://doi.org/10.1016/j.ecolecon.2004.10.006>
- La Repubblica. (2023). *Italia. Turismo outdoor da record: 56,6 milioni di presenze tra campeggi e villaggi nel 2023. Stranieri oltre il 50 per cento* (in Italian). [https://www.repubblica.it/viaggi/2023/04/13/news/italia\\_turismo\\_outdoor\\_2023\\_cifre-395956427](https://www.repubblica.it/viaggi/2023/04/13/news/italia_turismo_outdoor_2023_cifre-395956427) (accessed 29 May 2023).
- TG La7. (2021). *Il turismo vale per l'Italia il 13% del pil* (in Italian). <https://tg.la7.it/economia/il-turismo-vale-per-litalia-il-13-del-pil-30-07-2021-163184> (accessed 21 September 2023).
- Ente bilaterale nazionale del turismo e FAITA Federamping. (2023). *Verso un osservatorio sul turismo all'aria aperta. Dalla revisione delle statistiche alle indagini sulle imprese* (in Italian). Ciset, Università Cà Foscari.
- Ispra. (2009). *Turismo, capitolo 4* (in Italian). <https://www.isprambiente.gov.it/files/pubblicazioni/rapporti/annuario-2009/4-turismo.pdf/view> (accessed 21 September 2023).
- Istat. (2021). *Turismo, capitolo 19* (in Italian). <https://www.istat.it/storage/ASI/2022/capitoli/C19.pdf> (accessed 21 September 2023).
- Winter, P. L., Selin, S., Cervený, L., & Bricker, K. (2020). Outdoor Recreation, Nature-Based Tourism, and Sustainability. *Sustainability*, 12(1), 81. <https://doi.org/10.3390/su12010081>
- Di Carlo, I. (2016). *The aesthetics of sustainability. Systemic thinking and self-organization in the evolution of cities*. LISt Lab.
- Cavallino Treporti Municipality. (2021). *Dichiarazione ambientale Emas* (in Italian). <https://www.comune.cavallinotreporti.ve.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/575> (accessed 29 May 2023).
- Regione del Veneto. (2014). *Progetto IPA Adriatico SHAPE - Pianificazione Spaziale Marittima e Gestione Integrata delle Zone Costiere* (in Italian) <http://sistemavenezia.regione.veneto.it/content/materiale-scaricabile-del-convegno-progetto-ipa-adriatico-shape-pianificazione-spaziale> (accessed 21 September 2023)
- UNWTO. (1988) *Sustainable Development of Tourism*. <http://sdt.unwto.org> (accessed 29 May 2023).
- Wallace, G., & Russell, A. (2004). Eco-cultural tourism as a means for the sustainable development of culturally marginal and environmentally sensitive regions. *Tourist Studies*, 4(3), 235–254. <https://doi.org/10.1177/1468797604057326>
- Urry, J. (2002). *The Tourist Gaze*. Sage.
- Manca, E. (2017). Persuasione, tourist gaze e turismo di lusso: modi comunicativi e culture a confronto (in Italian). *Lingue e Linguaggi*, 20, 215–237. <https://doi.org/10.1285/i22390359v20p215>
- Berizzi, C., & Trabattori, L. (2019). *Mobile Home per il turismo all'aria aperta. Storia evolutive* (in Italian). Vicolo del Pavone.
- Lucivero, M. (25–27 January 2012). *Camping and Open-Air Tourism: An Opportunity for Sustainable Tourism in Coastal Areas*. The 6th Conference of the International Forum on Urbanism (IFoU): TOURBANISM, Barcelona, Spain.
- Istat. (2023) *Esercizi ricettivi* (in Italian). <http://dati.istat.it/> (accessed 21 September 2023).
- De Matteis, F. (2010). *Atopia, Teknoring. Il portale delle professioni tecniche* (in Italian). Wolters Kluwer. <https://www.teknoring.com/wikitecnica/progettazione-architettura/atopia/#:~:text=Dal%20greco%20a%20%2Dtopos%2C%20privo,con%20i%20luoghi%20dove%20sorgono> (accessed 25 May 2023).
- Tost, X. M. (2016). *Turismo, paisaje y arquitectura. El camping como proceso de regeneración en Salou* (in Spanish). Jornadas de Investigación Emergentes en Conservación y Restauración de Patrimonio.



24. Tost, X. M., & Martinez Duran, A. (2020). *Arquitectura del turismo informal. El habitar ludico en la naturaleza* (in Spanish). Ediciones Asimetricas.
25. Esenarro, D., Cabello, F., Amaya, P., & Vargas, C. (2020). Camping area and dock with viewpoint to promote sustainable ecotourist in the Ticellacocha Lagoon, Tanta-Peru. *International Journal of Environmental Science and Development*, 11(5), 268–272. <https://doi.org/10.18178/ijesd.2020.11.5.1261>
26. Berizzi, C., Capotorto, M., Terlicher, G. N., & Trabattoni, L. (2022). Coastal Vulnerability: Sustainable Settlements for Outdoor Tourism. In E. Giorgi, T. Cattaneo, A. M. Flores Herrera, & V. d. S. Aceves Tarango (Eds.), *Design for Vulnerable Communities. The Urban Book Series* (pp. 283–304). Springer, Cham. [https://doi.org/10.1007/978-3-030-96866-3\\_15](https://doi.org/10.1007/978-3-030-96866-3_15)
27. Saló, A., Teixidor, A., Fluvà, M., & Garriga, A. (2020). The effect of different characteristics on campsite pricing: Seasonality, dimension and location effects in a mature destination. *Journal of Outdoor Recreation and Tourism*, 29, 100263. <https://doi.org/10.1016/j.jort.2019.100263>
28. Cvelic-Bonifacic, J., Milohnić, I., & Vrtodusić Hrgović, A.-M. (2019). Differences in perceived campsite and destination quality: managers vs. guests. In *8th International Scientific Symposium. Economy of Eastern Croatia – Vision and growth* (pp. 681–691). Josip Juraj Strossmayer University.
29. Milohnic, I., Vrtodusic Hrgovic, A.-M., & Cvelic-Bonifacic, J. (4–5 October 2017). *Quality as a competitive advantage of campsites*. The 17th International Scientific Conference Globalization and its Socio-Economic Consequences, Rajecke Teplice, Stowacja.
30. Aas, Ø., Valan, S. K., Evju, M., & Vistad, O. I. (2022). Significant increase in negative impacts on vegetation and soils at informal campsites in a Norwegian national park in the period 1988–2020, Norsk Geografisk Tidsskrift. *Norwegian Journal of Geography*, 76(2), 125–131. <https://doi.org/10.1080/00291951.2022.2061372>
31. Netti, E. (2023). *Garda, la vacanza open air vale 1 miliardo* (in Italian). Il sole 24 ore. <https://www.ilsole24ore.com/art/garda-vacanza-open-air-vale-1-miliardo-AEr4VrnC> (accessed 25 May 2023).
32. Ufficio legislativo del MIBACT. (2004). *Decreto Legislativo 22 gennaio 2004, n. 42: Codice dei beni Culturali e del Paesaggio. Art136/142* (in Italian). [https://www.bosettiegatti.eu/info/norme/statali/2004\\_0042.htm](https://www.bosettiegatti.eu/info/norme/statali/2004_0042.htm) (accessed 30 May 2023).
33. Krautheim, M., & Pasel, R. (2014). *City and Wind: Climate as an Architectural instrument*. DOM publishers.
34. Cangelli, E. (2006). *Ecocamp, il campeggio ecologico e la riqualificazione ambientale della costa* (in Italian). Alinea
35. Regione Toscana. (2020). *La Toscana e i suoi patrimoni Unesco* (in Italian). <https://www.regione.toscana.it/la-toscana-e-i-suoi-patrimoni-unesco> (accessed 30 May 2023).
36. Bologna, G. (2010). *Biodiversità e scienza della sostenibilità* (in Italian). *L'Italia Forestale e Montana / Italian Journal of Forest and Mountain Environments*, 65, 359–362.
37. AUDe research. (2023). *Open air accommodation structures*. <https://aude.unipv.it/ricerca/mobile-homes-per-il-turismo-sostenibile/ricerca-turismo-sostenibile-mobile-homes-per-il-turismo-sostenibile-strutture-ricettive-allaria-aperta> (accessed 5 September 2023).
38. Berizzi, C., & Trabattoni, L. (2020). *Safe holiday camp*. <https://federcamping.it/manuali-pubblicazioni> (accessed 5 September 2023).
39. Bezzini, D., Schiavetti, I., Manacorda, T., Franzone, G., & Battaglia, M. A. (2021). First Wave of COVID-19 Pandemic in Italy: Data and Evidence. In A. A. A. Asea & P. Kaur (Eds.), *Coronavirus Therapeutics – Volume II. Advances in Experimental Medicine and Biology* (Vol. 1353, pp. 91–113). Springer, Cham. [https://doi.org/10.1007/978-3-030-85113-2\\_6](https://doi.org/10.1007/978-3-030-85113-2_6)
40. De Natale, G., De Natale, L., Troise, C., Marchitelli, V., Coviello, A., Holmberg, K. G., et al. (2020). The Evolution of Covid-19 in Italy after the Spring of 2020: An Unpredicted Summer Respite Followed by a Second Wave. *International Journal of Environmental Research and Public Health*, 17(23), 8708. <https://doi.org/10.3390/ijerph17238708>