

THE WALKWAYS LANDSCAPE IN PORTUGAL: – AMIEIRA DO TEJO CASE-STUDY

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Abstract: Considering the concept of landscape as a vital experience, this paper seeks to ethically and aesthetically address walkways and their role in the landscape of inland Portugal. As such, the Amieira do Tejo walkway shall be employed as a case study, exploring the appropriation of these walkway by communities and tourists as well as the benefits they provide. The methodology used was based on bibliographic research and on the results of surveys and interviews carried out about the walkways. The data was quantitatively analysed in order to understand: the user's perception of the quality of the landscape, the user's perception of the impact of walkway on the landscape, and the benefits of the walkway to people's quality of life. The results confirm the importance of the walkway to the landscape thanks to the extent to which they improve the quality of life of local inhabitants.

Keywords: Landscape, Walkways, Aesthetics, Ethics, Ecology, Amieira do Tejo

Resumo: Considerando o conceito de paisagem enquanto experiência vital, este artigo procura abordar ética e esteticamente os passadiços e o seu papel na paisagem do interior de Portugal. Para tal, utilizou-se como caso de estudo os passadiços da Amieira do Tejo e a sua apropriação pelos habitantes locais e pelos turistas, bem como os benefícios que proporcionam. A metodologia utilizada baseou-se na pesquisa bibliográfica e nos resultados de inquéritos e entrevistas feitos a locais e visitantes. Os dados foram analisados quantitativamente de forma a compreender: a percepção do utilizador sobre a qualidade da paisagem, a percepção do utilizador sobre o impacto dos passadiços na paisagem, e os benefícios dos passadiços na qualidade de vida das pessoas. Os resultados confirmam a importância dos passadiços na paisagem, na medida em que melhoraram a qualidade de vida dos seus habitantes.

Palavras-chave: Paisagem, Passadiços, Estética, Ética, Ecologia, Amieira do Tejo

Highlights

- The role of walkways in the landscape of inland Portugal
- Socioeconomic benefits of the walkways
- Impact of the walkways on the landscape

1. Introduction

This study is part of an exploratory project conducted by a group of researchers of an Associated Laboratory in Portugal (Universities of Minho, Nova de Lisboa and Évora). From more than 60 existent walkways in Portugal, our project focused in three case-studies distributed in the Portuguese inland landscape. This specific one focuses on the case study of the “Amieira do Tejo”, the walkway in Alentejo region.

This paper aims to contribute to the understanding of the role walkways play in the landscape and the development of villages in inland Portugal. More specifically, it addresses the implementation of walkways in the landscape, their aesthetic and ethical/ecological impact and how this is reflected in the improvement of the wealth and well-being of the populations of local villages.

This document shall employ the concept of landscape present in the European Landscape Convention and also rely on theoretical assumptions, specifically those adopted by authors such as Rosario Assunto (1973) and Maximo Ferriolo (2002), who defended “landscape” as an aesthetic and ethical reality.

Promoted now by City Council authorities, walkways have become an unquestionable presence in the rural landscape all over the country.

The referred goal of this paper is achieved by exploiting three research questions: i) the user's perception of the quality of the landscape, ii) the user's perception of the impact of the walkway on the landscape, and iii) the benefits of the walkway to people's quality of life. To answer these questions, the paper resorts to an original data set, collected through a survey questionnaire given to people using the walkway.

2. Theoretical background

The late 20th century brought a renewed interest in landscape as a figuration of an ecological, cultural, social, economic, ethical and aesthetic system (Matos, 2011). This is partly due to the growing concern surrounding issues connected to the environmental risks faced nowadays, which has consequently led to greater importance of ecology, climate changes and sustainability.

2.1 The concept of landscape

According to a philosophical approach, the concept of landscape is inherent to the act of experience and living (Assunto, 1973). Landscape is an aesthetic but also an ethical reality because it is linked to an action and to a human being in their own environment and community (Ferriolo, 2002). This action can be considered as having both social and ecological/environmental benefits.

According to the preamble of the European Landscape Convention (2005), the landscape is of important public interest in the cultural, ecological, environmental and social domains. It constitutes a resource favourable to economic activity, the protection, management and planning of which can contribute to creating jobs. So, in addition to the idea that it is a vital experience, landscape is also considered a resource favourable to economic activities and an aspiration of the public to which the walkways contribute.

The concept of landscape is a holistic concept in which living beings – animals, plants, and man act in a complex way on a physical substrate, giving rise to a certain image (Lei de Bases do Ambiente, 1987; Landscape Convention, 2005; Caldeira Cabral, 1973; Matos, 2011). This image is, therefore, much more than what is seen, as it carries ecological and cultural meanings (including economic and social meanings) (Jackson, 2003; Burel and Braudy, 2001). For ecologically trained authors, landscape is the "sensory perception of the underlying ecosystem⁵." For authors with an aesthetic or literary background, landscape is the portion of space that can be covered with a glance (Solnit 2001; Spirn, 1998; Assunto, 1973; Ferriolo, 2002; Maderuelo, 2008). Ribeiro Telles (1994) refers the extreme importance of the adequacy of human activities to the biologic essence of the landscape. Also, the systemic character of the landscape is often referred integrating culture and nature (Cancela d'Abreu et al., 2004; Magalhães in Serrão, 2007).

Relating these different approaches to the concept of landscape and its integration and articulation with various disciplines, two major currents have developed regarding the study and practice of landscape design: the ecological approach, which is based on a new vision of the relationship between Man and Nature, and the perceptual and aesthetic approach, which considers the landscape as a formal manifestation and seeks to understand the processes that contribute to its scenic and visual quality and cultural and emotional significance. The convergence of the various disciplines and authors towards integrating both approaches and perspectives into the concept of landscape over the last decades reflects a return to the lost multifunctionality intrinsic to the concept of landscape and the acceptance of its understanding as a complex and dynamic system, resulting from cultural and natural processes in constant transformation (Matos, 2011).

The approach to landscape should always integrate a holistic, integrative, inclusive, and a multifunctional understanding. This is the idea of landscape that is considered in this work, in which landscape is simultaneously understood as a phenosystem and a cryptosystem, given the holistic notion of the concept and its operative and interventional character.

⁵ Bernáldez, G. (1981). *Ecología y Paisaje*. Madrid: H. Blume Editiones. (author's translation).

2.2 Inland landscape contextualization

Portuguese interior landscapes have undergone dramatic changes since the 1960s, when people left their homelands in search of a better life abroad or on the outskirts of Lisbon. Depopulation is now irreversible in 80% of Portugal's land area, where less than 20% of the population lives, most of them aged and with significant shortcomings in terms of basic services, from health to security and communications (Almeida in Seixas & Rodrigues, 2021).

The rural landscape we have today is the result of the combined effect of demographic emptying, abandonment and the obsolescence of agricultural activity as an economic support for the population. The decline in the active farming population has occurred at an accelerated rate and without, in most cases, a process of productivist agricultural modernisation. The visible consequences of this are the abandonment of work on the land and, consequently, the rapid degradation of the landmarks of traditional landscapes (Domingues, 2003; Pereira dos Santos, 2017). Spaces dominated by agriculture and other primary sector-based economic activities changed to sparsely populated and abandoned areas. Few rural area practices are orientated toward leisure, tourism, in a consumerism perspective (Silva et al, 2025). However, these changes that are cultural but also natural in the landscape are inherent to its dynamic character (Jackson, 2003; Burel and Braudy 2001).

According to Freitas (2006) and Pereira dos Santos (2017), to reverse this situation, it would be necessary to create economic efficiency through the competitiveness of rural economic activity. Greater decentralisation away from the coast and big cities, greater investment in universities in the interior, greater support for agricultural activities and payment for ecosystem services, among others, could contribute to this economic efficiency. The municipalities where the studied walkways are situated defend that these structures, along with agritourism, ecotourism and rural tourism contribute to economic efficiency of the territory. This justifies their presence all over the country.

2.3 Walking in landscape

Walking has been intrinsically linked to the territory even before the existence of the term "landscape". It stems first from the necessity of survival – finding food, water, shelter – and later takes a symbolic, cultural and ludic form (Solnit, 2001; Careri, 2002). So, we can say that walking is determined by landscape and that walking designs landscape. In this way, the practice of walking is perfectly framed in the aesthetical approach to landscape, "a living experience" (Assunto, 1973; Careri, 2002), and in an ethical approach (Ferriolo, 2002; European Landscape Convention, 2005), considering that it is a resource favourable to economic activities contributing to a better quality of life of the inhabitants and visitors.

As long as man has been aware of walking with a symbolic meaning, as an end in itself and a means of achieving transcendence, clarity and pleasure, walking became culture, designing cultural landscapes. However, the *wanderlust* of Solnit (2001) and the *saunterer* of Thoreau (2021), the act of wandering experimenting nature, freedom, and wild spirit, is not quite the same walking as the one done on walkways. On walkways, the combination of bodily movement, contemplation and fresh air still remains the epitome of salubrity for urbanised people in the postmodern. However, its popularisation corresponds to a hiking tourism⁶ that becomes a popular wellness travel trend across the world (Lee et al., 2018; Rodrigues, Kastenholz & Rodrigues, 2010), where Portugal is not an exception.

In this sequence, we have witnessed the construction of walkways or boardwalks⁷ aiming to leverage the attractiveness of nature-based tourism destinations, including the inland landscapes improving the life of its inhabitants. Some authors defend that these structures as well as tracks and viewing platforms built in designated scenic areas can also be regarded as part of the *naturescape* (Thompson

⁶ Hiking tourism refers to "a vacation or holiday related outdoor activity that consists of shorter or longer walks in natural and cultural landscapes, and often in rural areas" (Nordbo, Engilbertsson, & Vale, 2014, p. 383).

⁷ A boardwalk is an elevated footpath, walkway, or causeway built with wooden planks that enables pedestrians to cross wet, fragile, or marshy land.

et al., 2016). Although walkways don't allow wandering, they provide a route, shorter or longer, with a beginning and an end. There, people are safely in contact with nature and practice physical exercise, becoming part of a cultural landscape that is transformed with this utilisation. According to Tiberghian (2002), walking is an obvious way of looking, touching and feeling the landscape perceiving its wholeness.

3. Methodology

The methodology comprises three steps: i) selection of case studies, ii) questionnaire applied to walkaway visitors, and iii) exploratory interviews with stakeholders within the region (tourism operators, restaurants, local shopkeepers, and residents).

3.1 Selection of the case-study

As it was mentioned, our project focused in three case-studies distributed in the Portuguese inland landscape: Paiva walkway, Mondego walkway and Amieira do Tejo walkway (Fig 1).



Fig 1. Location of the studied walkways. Based on: Google map

3.2 Amieira do Tejo landscape and walkway

Amieira do Tejo is located to the west of the municipality of Nisa (Fig.2), in a transitional area between granite and schist bedrocks resulting in steep-sided valleys and steep slopes. The most notable feature within the landscape is the Rio Tejo, which characterises and structures the landscape, gracing it with a very particular beauty and richness. The natural and semi-natural habitats, fauna, and flora reflect this richness, making them a strong point of the region. The climate is Mediterranean, which is characteristic of the entire inland area of the centre and south of the country, providing significant potential for outdoor and nature-related activities. This richness, biodiversity and beauty is related to the fact that Amieira do Tejo is in a transitional area between 4 distinct landscape units (Cancela d'Abreu et al., 2004).



Fig 2. Location of Amieira walkway in relation to Nisa and Amieira do Tejo Village. Based on: Google map

Although the natural components are particularly strong in the landscapes of this schist valley, with its slow-moving waters, there are sometimes olive groves on its slopes that benefit from the relatively mild climate (Câmara Municipal de Nisa, 2010). In other situations, where the slopes are less steep, the land use of the higher surrounding areas overflow onto the slopes of the valley. The area's particular difficulty of access and isolation has favoured the permanence of important natural values, both in terms of vegetation and fauna, particularly birds, which justified the creation of the Tagus International Natural Park. The vegetation in the location determines habitats of importance to Portugal's natural heritage (Ferreira and Sousa, 2008). In terms of fauna, large birds of prey are the most notable. The land use here is generally consistent with the strong constraints imposed by the environment, with the exception of some forests, arable systems, and areas subject to overgrazing, which leads to soil degradation, including increased erosion problems.

In terms of the area's population, a downward trend has been registered, just as seen in the rest of the country's inland areas and the Alentejo. The area has an aging demographic, where the elderly make up the majority of the population and the mortality rate exceeds the birth rate (Câmara Municipal de Nisa, 2010). The population's economic activity rate is very low: less than half of the resident population is active.

Cultural, ethnographic, heritage, and historical resources stand out as potential exploitable resources in the tourism sector. The landscape presents significant potential for nature tourism, adventure tourism, and tourism linked to health and well-being, in addition to more traditional activities such as handicrafts, gastronomy, and hunting. Rural tourism, sports tourism (or adventure tourism), and others are advantageous to reducing seasonality and increasing the number of visitors. The Nisa City Council intends to develop these areas, among others. This is where the Amieira do Tejo Trail comes in, similarly to the trend registered all over the country (Fig.3).

The Amieira do Tejo walkway were inaugurated in 2021. The construction cost about 320,000 euros, 85% of which was co-funded by the EU European Development Fund. The Barca d'Amieira Trail, as it is known, is a pedestrian route that includes a pedestrian suspension bridge (Fig.4), a transparent viewpoint over the River Tagus (skywalk), and a birdwatching station.

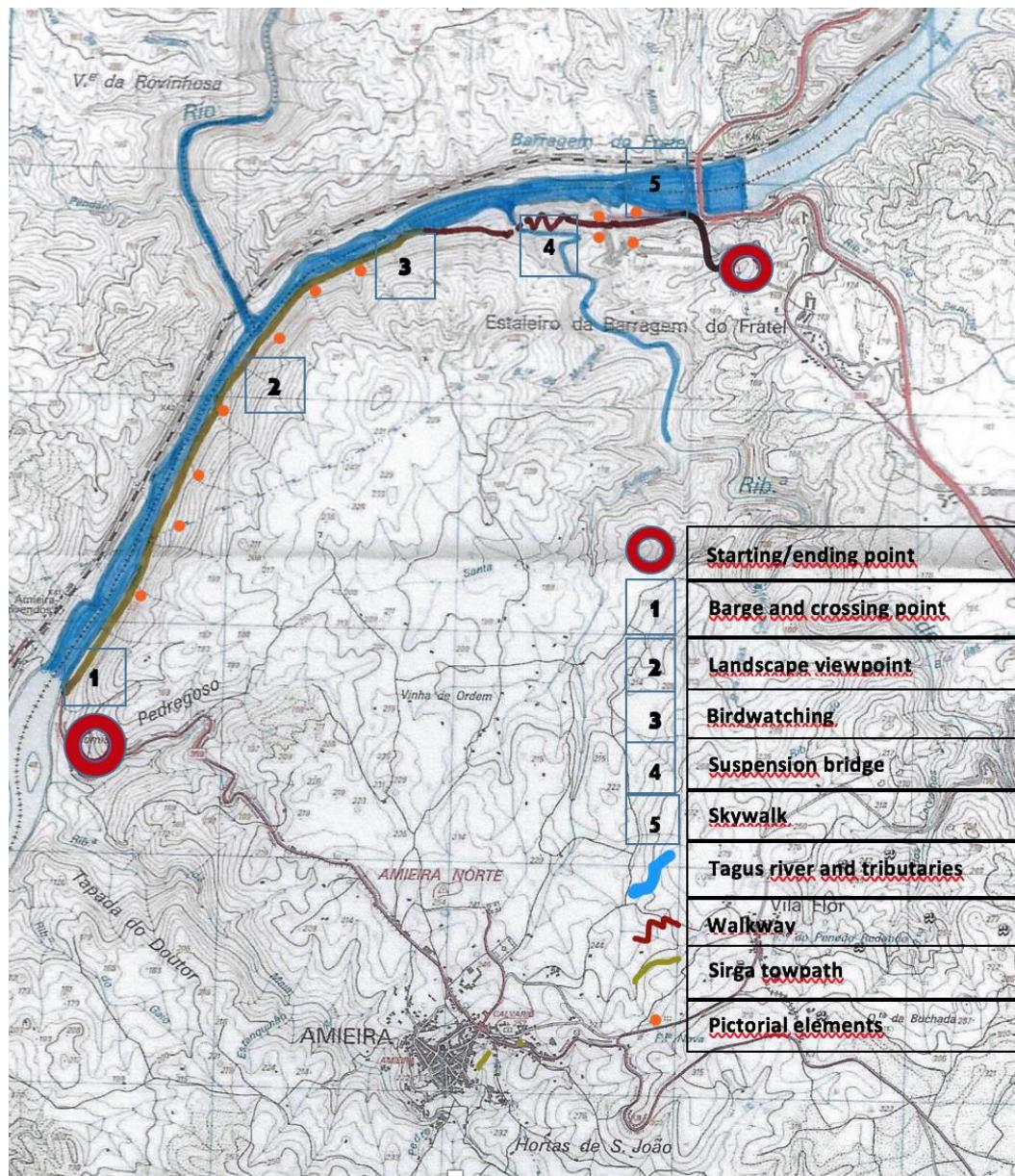


Fig 3. Amieira do Tejo walkway. Working document based on military map on a scale of 1:25000

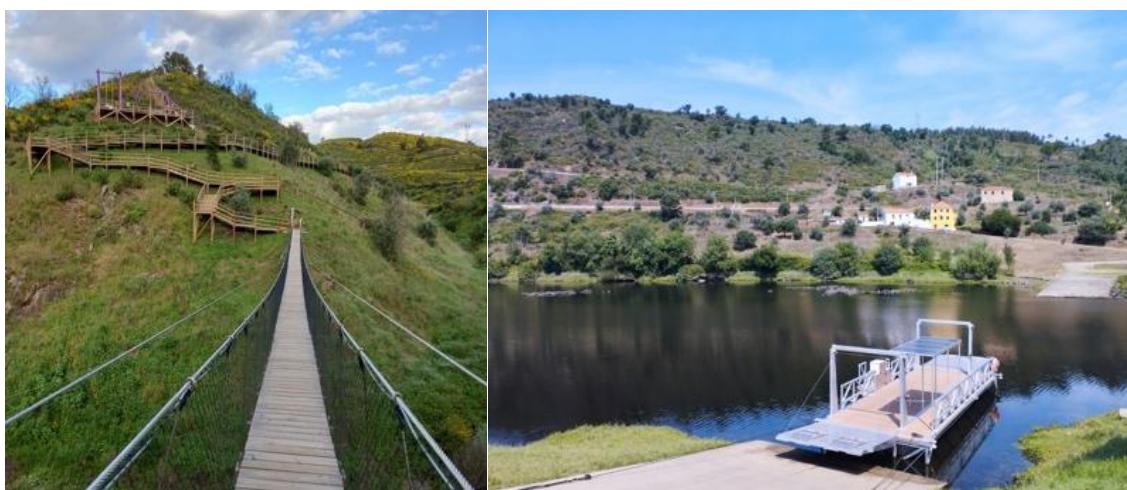


Fig 4. Amieira do Tejo Walkway. Left: pedestrian suspension bridge and boardwalk. Right: Barge and crossing point. Source: author's own photo

It also includes a historic “sirga” towpath along most of the route.⁸



Fig 5. Amieira do Tejo walkway. Left: Sirga towpath. Right: Walkway and river Tagus and Figueiró stream. Source: author's own photos

The trail is linear and about 3.6 kilometres long linking Barca d'Amieira, in Amieira do Tejo, to the transparent viewpoint over the Tejo, next to the Fratel Dam (Fig. 3). However, this stretch is not made up of continuous walkways. The section of the trail that links Barca d'Amieira to the vicinity of the Ribeira de Figueiró, shares the route with the Trilhos das Jans (PR1 de Nisa), always following the towpath (Fig. 5), which once served to aid navigation on the Tagus, with boats towed by sheer strength along the river by means of this wall⁹.

The walkway itself was only built between the vicinity of the Ribeira de Figueiró, over which the pedestrian suspension bridge is located (Fig.4), and the skywalk viewpoint. This makes it possible to cross an area of the trail that would have been most demanding, allowing a wider range of people to access the trail. The entire wooden walkway is approximately one kilometre long, limited to the hillside section and the bridge, which makes its impact considerably smaller than that of other walkways. The presence of pictorial elements along the trail is debatable, but given their removable nature, they have not conditioned the construction of the landscape space (Fig. 6).



Fig 6. Pictorial elements. Left: Indian. Centre: Cat. Left: Eden garden. Source: author's own photo

⁸ A path along the banks of a river or canal that facilitates the pulling of boats by animals or people. This manoeuvre is called “à sirga” in Portuguese. The “sirga” was the cable used to pull the boat along the water's edge when sailing or rowing was not possible. With motorised navigation and other means of transport, the “sirga” paths were abandoned. In Portugal, there used to be “sirga” paths along the Douro and Tagus rivers. Some stretches were submerged by dams and others were converted into leisure activities.

⁹ https://www.cm-nisa.pt/images/documentos/areas_atividade/desporto/pr11.pdf

3.3 Questionnaire administered to visitors

To measure the ecological and aesthetic impacts of the walkway on the landscape, this study developed a questionnaire made up of four sections. The first section corresponds to individual respondent data. The second section collected information about the reason for their trip. The third section asked respondents to evaluate their journey to the walkways. The fourth section asked respondents to assess the positive and negative impacts of these infrastructures, specifically the quality of the walkway in terms of landscape quality, accessibility, security, cleanliness, infrastructures, internet coverage, benefits for the region, attractiveness, and impact on the landscape. Adopting some measures adapted by the research group (Azevedo et al., 2024), respondents also rated their overall satisfaction, whether they would recommend the visit and answered an open-ended question listing all the advantages/disadvantages of the walkways to different stakeholders and relating to various factors (residents, economic activity, and tourism).

According to Sajise (cited in Azevedo et al., 2024), open-ended questions have several advantages: they are straightforward, simple to deal with in terms of statistical techniques (simple descriptive statistics can be enough, such as sample means and medians). However, the same authors pointed out some limitations: respondents may avoid responding, leading to large nonresponse rates, protest answers, zero answers, outliers (i.e., unrealistically high amounts), and responses that are generally too unreliable. They are also difficult to use effectively in valuing public goods because respondents want to know what others in the community are going to pay before they give an answer.

The questionnaire was administered *in situ* by recruited interviewers who received instructions about how to approach respondents, usually at the beginning or at the end of the walkway or while visitors were resting from walking. The questionnaires were filled out either by paper-and-pencil method, in an online Google form by interviewers, or by respondents who read the survey QR code on their smartphones. The data was collected from March to May 2023. The survey was responded by 120 visitors. Participants took approximately 20 minutes to complete the survey, which was available in Portuguese, Spanish and English.

3.4 Interviews with locals

The data obtained via this survey was complemented by 7 semi-structured interviews conducted with tourist entrepreneurs, restaurants, homestays, museums and residents in the parish and municipality crossed by the walkway under investigation. Notes were taken on the remainder of the interviews which addressed the following principal themes: perceived and anticipated positive and negative local impacts of the walkways; assessment of the project's overall cost; and perceptions regarding the contribution of this project to local development and the fight against depopulation (Silva et al., 2025).

4. Results

4.1 Questionnaire administered to visitors

Tab 1. Socio-demographic individual data (120 interviewed people). Source: author's elaboration

Socio-demographic data	N (120)	%	Socio-demographic data	N(120)	%
Female	70	58.3	Level of Education	N (120)	%
Male	50	41.6	No Response	0	0
Total	120	100	Up to 4th Grade	0	0
Age (M, SD) (47.24; 14.014)	120	-	from 5th to 9th grade	7	5.8
Economic Activity			from 10th to 12th grade	23	19.1
Student	10	8.3	Professional course	8	6.6
Unemployed	5	4.1	Undergraduate / Postgraduate	82	68.3
Retired	11	9.1	Place of Residence	N (120)	%
Employed	79	65.8	Walkway's Municipality	16	13.33
Self-employed	4	3.3	Other municipalities from the walkway's District	32	26.2
Entrepreneur	11	9.1	Other Portugal Mainland	62	51.6
Other (Military)	0	0	Portuguese Islands	2	1.6

Table 1 presents the socio-demographic characteristics of the 120 respondents. The majority of respondents were female (more than 58%) and the average age was 47.2 years old. The majority of respondents (95%) were Portuguese nationals. The composition of the sample in terms of employment type and education level was that 65.8% were employed and 68.3% were university graduates.

Table 2 presents data related with the characteristics of the trip and stay. With regard to the type of accommodation, only 4.9% spent the night in hotels and local accommodation in the municipality, which means that the majority of their spending was on restaurants and regional products. The average cost of a visit was 37.42 euros.

It is interesting that 20% of respondents have visited the Barca da Amieira trail more than once. Of these, 10.7% live in Nisa, which means that there are people outside the municipality that consider this walkway good enough to come back.

It is worth emphasizing too that 47% of the visitors have visited other walkways indicating that it is a way to spend free time.

Tab 2. Trip data for 120 interviewed people. Source: author's elaboration

Reason for trip	N	%
Walking alone	5	4.1
with family	59	49.16
with friends	31	25.8
with an excursion group	25	20.8
One of the reasons that made me decide to take this trip to this region was to visit the walkway...	N	%
Yes, it was the only reason	39	32.5
Yes, it was the most important reason	36	30
Yes, but it was not the most important reason	31	25.8
No, I visited by mere chance	14	11.6
Type of Accommodation	N	%
Hostel	0	0
Local Accommodation (e.g., Airbnb, rural tourism)	3	2.5
Caravan	0	0
Friends' home	14	11.6
Hotel **	0	0
Hotel ***	1	0.8
Hotel ****	2	1.6
Hotel *****	0	0
I did not stay overnight	90	75
Resident	10	8.3
People that expend money (accommodation, restaurant, etc.)	86	71.6
Visit to similar structures	57	47.5
More than one visit (to this walkway)	26	21.6

Tab 3. Visitor's evaluation of walkway quality, the positive/negative impacts on local tourism, residents' quality of life, and landscape (SD- standard deviation). Source: author's elaboration

Amieira ATW Positive Impacts	(N=120)	
	Mean	SD
Scenic Quality	8.78	1.446
Access to the site (roads, signs, etc)	7.98	1.692
Security (accident protection, first aid)	6.71	2.247
Security (surveillance, protection against crime)	6.16	2.359
Level of cleanliness and rubbish collection	8.13	1.918
Infrastructures (toilet, car park)	6.95	2.452
Infrastructures (restaurants and nearby accommodation)	5.36	2.496
Quality of internet coverage	5.94	2.370
Economic benefits for the region	7.72	2.001
Benefits for the quality of life of local populations	7.38	1.945
As a factor to attract local tourism	8.39	1.692
As a factor to attract residents to the municipality	7.38	1.945
As a factor in the creation of new jobs	5.78	2.309
Impact on the landscape	7.53	2.188
Negative impacts		
As a factor that generates an increase in the prices of goods and services	3.98	2.165
As a factor that generates conflicts between local populations and visitors	2.83	1.817
As a destructive factor of the natural, cultural and/or landscape heritage	3.43	2.188
As a factor that increases the region's dependence on tourism	4.10	2.217
As a source of pollution and rubbish	4.19	2.377

Table 3 presents visitors' perceptions and ratings about the walkway characteristics, overall quality, and relationship with the landscape.

Table 4 presents visitors' mentions about the walkway positive aspects. Regarding the positive aspects found and mentioned by the respondents, in an open question, 55% of respondents cited the beauty of the landscape as the most positive aspect of the walkway. In second place came the walking opportunity presented, which 4.2% mentioned as the most positive aspect.

Tab 4. Positive aspects mentioned by visitors. Source: author's elaboration

Amieira ATW	N	%
No response	26	21.6
Beauty of landscape	66	55
Walking in nature	5	4.2
Opportunity to access a remote area	4	3.3
Tranquillity/Peace	3	2.5
Cleanliness	3	2.5
Sport/ physical activity+	3	2.5
Driver of tourism development	2	1.6
Structures (bridge, observation tower, swing, decorative features)	2	1.6
Heritage values	2	1.6
Proximity to the river	1	0.8
Leisure activity with family and friends	1	0.8
Many	1	0.8
All	1	0.8

Amieira ATW	N	%
No response	41	34.1
Walkway Safety (protection, irregular floor, swing bridge)	20	16.6
None	18	15
Decorative Features	6	5
Support infrastructures (WC, bar, food zones, water, rest zones, rubbish bins)	6	5
Rubbish	5	4.2
Excess of people	5	4.2
Accessibility/ lack of parking areas	4	3.3
Heat/no shade	4	3.3
Impact on Landscape	3	2.5
Lack of signs and information	2	1.7
Lack of identifiable elements	1	0.8
Lack of wooden walkways	1	0.8
Looks like an amusement park	1	0.8

Table 5 presents visitors' mentions on the walkway negative aspects, also in an open question. Lack of security was the most mentioned (16.6%), specifically in relation to protection with regards to the river, the irregularity of decking, and the bridge (instability). It should be noted that 15% of the interviewees found no negative aspects.

When asked whether the 320,000 euros invested in the walkways is justified, only 9.91% of those interviewed said no, while the remaining 90.09% confirmed that the investment is justified. In the open question regarding suggestions for improvements to this walkway, although very few, references were made to the fact that there should be more incentive investments in inland Portugal to combat desertification.

According to the visitors' surveys results, a fondness for walkways in general is very evident. The main part of the respondents makes a habit of visiting walkways, which is in line with the idea that these structures are "fashionable", mainly due to the importance of walking as a way to improve well-being and to know other places and landscapes. For most visitors, the walkway was the reason for their visit to Amieira do Tejo. Experiencing this walkway, and particularly this landscape, led to the return of many respondents for a second time. Although some visitors did not expect to spend money on this trip, the majority of them did, demonstrating the economic and social benefits for the municipality.

The less positive impact of the walkway mentioned was a lack of supporting structures, specifically restaurants (with an average of 5.36 on a scale of 1 to 10) so it is easy to understand why the village of Amieira do Tejo is not reaping the economic and social benefits as much as the city of Nisa, where most of the restaurants, accommodation, commerce and crafts are located. Those responsible for this structure – the Nisa City Council (NCC) – should be attentive to this issue. The most cited positive impact was the scenic quality (landscape), followed by its attractiveness for local tourism. The scenic quality, i.e., the quality of the landscape, is confirmed by the results presented in Table 4, where 55% of the respondents consider the quality of the landscape as the most positive aspect of the walkway, reinforcing the aesthetic approach followed by the act of walking provided by the footpath (4.2%).

4.2 Interviews with locals

In Amieira do Tejo, the interviews were not well received by most of those contacted, particularly the mayor and councillors, with whom interviews were not conducted. Of all those contacted, only 7 interviews went ahead: 5 in Amieira do Tejo and 2 in Nisa. In the village of Amieira, the interviewees were: the Amieira Tejo Guesthouse (ATGH), the Amieira do Tejo Sports Club (ATSC), a resident (RESID.), a boat operator (B.OP), and the employee of the Amieira do Tejo Tourist Office (ATTO) (the latter two of whom are employees of the City Council (CC)). In Nisa, the employees of the Embroidery and Clay Museum (ECM) and of the Tourist Office (NTO) were interviewed.

The questions asked were:

- i) *Do you consider the 320,000 euro investment, financed 85% by the EU, in the Barca da Amieira Trail to be positive?*
- ii) *What benefits does this infrastructure bring or could it bring to the municipality, and at what levels?*
- iii) *Have you noticed any economic return for the region?*
- iv) *Has there been an increase in the number of visitors/customers since the viewpoint was built? Has there been an increase in the length of stay? Has there been an increase in revenue/spending per tourist?*
- v) *How does this structure contribute to the image of the municipality as a tourist destination?*
- vi) *Do you know of any businesses that have been created as a result of the structure opening?*
- vii) *Does the construction of this equipment combat depopulation? (By retaining residents/attracting new residents)*
- viii) *How many times have you visited the trail?*
- ix) *What do you like most and least about this walkway?*
- x) *Has the landscape changed, do you think it has changed? Has the landscape changed, do you think for the better or for the worse?*
- xi) *How do you rate the design of the built structure?*

Tab 6. Excerpts from the answers to the first seven interview questions. Source: author's elaboration

	i)	ii)	iii)	iv)	v)	vi)	vii)
A T G H	No doubt	Newcomers are boosting the economy.	We haven't noticed it yet. But we hope to.	We haven't seen an increase in overnight stays yet.	Yes, a lot; the Municipality started to get known.	Yes, I know. Our accommodation	Yes
T S C	No	It doesn't benefit the village. Tourists come, visit the walkways, and leave.	No	The closure led to an increase. People leave, even though there are 4 LAs in the village.	For the municipality, yes. People go to restaurants in Nisa.	It looks like 1 local accommodation, but there were already more.	If people move here, it's to escape the bustle of the city.
R E S I D .	Very much	Many. Amieira needs restaurants to boost the economy	More in Nisa and Alpalhão (for restaurants)	Yes, but few restaurants and shops. There is accommodati- on but not enough.	A lot. Many Spaniards come.	3 local accommodations	Yes, I know of houses being sold for renovation.
B .O p	Yes	Economic and social benefits already being felt.	Yes	Visitors and house buyers are up.	It's much better. Amieira is now on the map.	Yes, 1 local accommodation	Yes, yes
A T T O	Yes, Local economy is better	Visitor numbers are up threefold. Changes are already evident in catering and accommodation	There are more tourists. Restaurants are full and overnight stays are up.	Yes, the CC's publicity has also led to more money being spent in the region.	It adds to the beauty and tranquility of the landscape. Many people continue to come.	No, but local accommodation has been built to cater for the high number of tourists.	Yes, there has been a great demand to buy a house in Amieira.
E C M	No doubt	It increases the flow of tourists and acts as a leisure centre for the local population.	I don't know about the region. Visits to the museum have increased.	Trails opened at pandemic's end. Hard to say why visitor numbers are up.	It certainly helps. It is much better known now.	No	I don't think so
N T O	Yes, quite a lot	It benefits the potters: five are working and they've sold out.	Yes, especially for artisans and restaurants.	It's hard to say. The renovated R. St. Maria in Nisa also attracts people.	Both contribute – walkways and R. St. Maria, which is very beautiful...	No	Yes, and the end of the pandemic and Stª Maria street.

The first seven questions show the economic and social benefits to the region. The respondents' answers to these questions were as follows in the next two paragraphs.

Tab 7. Excerpts from the answers to the last 4 interview questions. Source: author's elaboration

	viii)	xix)	x)	xi)
A T G H	3	I like everything	For the better	5 stars
A T S C	Never. I don't have the time and I don't think it's worth it.			
R E S I D .	More than 1000	I like the bridge and the viewpoint best. I like the pictorial elements less because they are not from the region, for example the Indian, and they de-characterise the landscape.	I think it has been partly misrepresented by pictorial elements that have nothing to do with this landscape.	Very good. It's now known for the footbridges, but most of the trail is Sirga walls and they've been there for a long time.
B .O.P	Twice a week. I collect the rubbish.	There's nothing I like less. My favourites are the viewpoint, the bridge and the swing..	I think it's changed for the better.	It is good
A T T O	2	What I like most is the scenery, and what I like least is seeing too many people on the trail at the same time, because the load capacity becomes too much.	I think it looks nice and attractive.	On a scale of 0 to 10, I give it a 9.
E C M	3 times in 4 months	I like the swing more and the Indian less, because it has nothing to do with the culture and identity of the region.	No damage to the landscape and multiple uses possible	Like all the others. It could be much better
N T O	Never. I'm in a wheelchair and the walkways are not accessible. If they were, I would have been there.			

From interviews with locals and in terms of the economic and social benefits to the region, with the exception of the ATSC, respondents unanimously agreed that the investment made into the trail has been positive. The ATSC's recurring negative response, namely "I don't consider the investment to be positive, as the benefits it brings to the village of Amieira do Tejo are few", is justified by the lack of benefits for the village of Amieira do Tejo, as no accommodation is available to visitors in the village. The benefits are therefore felt by the city of Nisa, where restaurants, accommodation, and shops are located. The increase in income is therefore seen by the wider municipality and not by the village itself where the trail is located. This statement is in line with the aspect identified as the least positive in the visitor questionnaires: the lack of supporting infrastructure. The interviewees in Amieira do Tejo, who are linked to the NCC, responded positively to all the questions asked, considering that the walkway is of great benefit to the community. It should be noted that the boat operator stating: "the walkway put Amieira do Tejo on the map", is also the owner of the only café next to the trail and, therefore, the business that benefits most in Amieira do Tejo. As for the ATTO employee: "we are receiving three times as many visitors as we did before the walkway was built, and the difference is noticeable both in terms of catering and accommodation in the municipality", he has access to data and information that allows him to state that the number of visitors has increased considerably and, consequently, that the walkway has brought benefits to the community.

Interviewees in Nisa said that the community benefited greatly from the construction of the walkway, but also from the improvements made to the streets in Nisa city centre, both initiatives that coincided with the end of the pandemic: "it is difficult to determine, as visitors come and go. Revenue is calculated more on a daily basis. Since Rua de Sta. Maria, in Nisa, has also been rehabilitated, both the walkway and the road bring a lot of people to Nisa. It should also be noted that the walkway opening coincided with the end of the pandemic, so it is difficult to pinpoint the cause of the increase in visitors" (NTO employee) and: "I don't think it has attracted new residents" (ECM employee).

Questions 8 to 11 refer to the respondents' relationship with the walkway and the landscape. The findings are described in the next paragraph.

The interviewees were familiar with the walkway, with the exception of the ATSC, who showed no interest in exploring it, and the NTO staff member, who uses a wheelchair, which makes it impossible for him to go there. The remaining five interviewees were very positive about both the walkway and the landscape. It is interesting to note that one of the interviewees referred to the excess of visitors who "steal the silence from the landscape" (the aspect he considered least positive – ATTO employee). It is also worth highlighting the less positive reference (which distorts the identity of the region) to the pictorial elements (Fig. 6) that appear along the trail, both by visitors and locals. However, there are very positive references to the elements that provide activities (swings, viewpoint, bridge (Fig.4)). The "sirga" towpath was often mentioned as one of the favourite elements because of its identity, character, and aesthetic quality (Fig. 5).

Regarding the economic and social benefits (ethical benefits), we noted a difference among the answers provided by the interviewed local agents in Amieira do Tejo: those who are NCC employees, "there are more visitors; many of them stay in the municipality and also invest some money into the local economy" (ATTO employee) and those who are not NCC employees (less positive): "the benefits are exclusively for the café located near the start of the walkways, next to the boat crossing", (ATSC). Differences were also noted between the responses given by NCC employees in Nisa and Amieira do Tejo, due to the difference in proximity and contact with the local reality.

About the relationship with the walkway and the landscape we can verify that, the visitor survey responses are consistent with the interviews of local agents, where only one of the interviewees did not consider the investment in the walkway to be positive.

5. Discussion

According to the results, the general opinions of visitors and locals about the walkway are quite similar, although there are some differences. For visitors, their expectations of the walkway are to enjoy the walk, appreciate the landscape, enjoy contact with nature, get some physical exercise, visit new places (which would remain unknown or inaccessible without this structure), try local products and food, and buy some handicraft souvenirs. The walkways have become an excuse to travel with friends, family or alone, and there are many people who 'collect' walkways as a form of leisure.

The local people hope that the trail will improve their quality of life, both economically and socially. They also appreciate the fact that people come and enjoy their isolated and forgotten village and landscape. They believe that Amieira is now known for its trail.

However, there are some less positive aspects for both visitors and locals, namely the lack of support structure such as restaurants or shops selling local products and handicrafts. For visitors, this would be a better way to enjoy the walk with a nice ending; for locals, it would be a way to improve the economy of the village and thus their lives.

Regarding the first research question (i), *the user's perception of the quality of the landscape*, the results show that both visitors and locals have a positive perception of the quality of the landscape. For visitors, the landscape appears as a new and beautiful landscape to walk around and enjoy – a surprise, something new to discover. For locals, it is their landscape. The landscape they have built, the landscape they have memories of and stories to tell about, the landscape they belong to and want to stay in, or return to.

A landscape that is beautiful not only for its scenery, but also because it reflects the act of experiencing and living, as the philosophy of the mid-20th century (Assunto, 1973) put it.

Regarding the second research question *(ii), the user's perception of the impact of the walkway on the landscape*, visitors and locals, have the same perception and are aware of the impact not so positive that the wooden structure of the trail has on the landscape (more so the locals). The pictorial elements also have a less positive impact as they lack references to the region and local identity. Both visitors and locals are also aware of the impact that large numbers of tourists have on the landscape and the disturbance they cause to its tranquillity. Indeed, making something accessible always carries the risk of trivialising, revealing and vulgarising what was previously a closely guarded secret. Environmental and ecological problems (loss of biodiversity) can result from this possible overuse. This could be a future project: monitoring biodiversity and ecosystem services to assess the sustainability of this structure, combining ecological issues with human needs (social, economic, aesthetic, cultural, educational and recreational), the ecological complexity of the trail systems and the aesthetic principles that govern them.

The third research question *(iii), the benefits of the walkway for the quality of life of the people*, is very much agreed upon. Visitors and locals agree that the trail attracts people to walk, to visit the region and improves the local economy. These structures also help improve physical and mental health by allowing people to walk and get in touch with nature in an unspoilt landscape.

The economic and social benefits of walking are in line with what Ferriolo (2002) calls the 'ethical reality'. They are also in line with the preamble of the European Landscape Convention, which defines landscapes as having an important public interest role in social terms, making them a favourable resource for economic activity that can contribute to job creation, and as a public good (European Landscape Convention, 2005). However, these benefits could be maximised if there was an investment in supporting structures (restaurants, shops, museums and craft sales) in Amieira do Tejo – the small village where the trail is located. Those responsible for this structure – the Nisa Municipal Council (NMC) – should pay attention to this issue.

6. Conclusion

Walking is part of the act of constructing a landscape that is holistic and a product of a dynamic natural system together with human activity. The landscape determines walking and walking shapes the landscape (Solnit, 2001; Careri, 2002).

The appearance and popularity of walkways came about as a way of combating social desertification in the interior of Portugal and as a response to the recent general practice of physical exercise. In Portugal, walkways are widespread throughout the country, and they contribute to make the landscapes, villages and populations of the interior – and therefore 'forgotten' (Domingues, 2003; Pereira dos Santos, 2017) – accessible, popular and alive. Ecological risks, visual impacts and mass tourism are highlighted as threats, alongside the socio-cultural and economic benefits they bring to the interior, making them somewhat controversial.

The aesthetic value of this landscape is perceived, understood and recognised by people. The economic and social benefits are undeniable. There is also a clear perception of the impact of the walkway itself, as a structure, on the landscape. The ecological issues should be monitored in conjunction with other human needs. We believe that a cost-benefit analysis should be carried out to validate the result obtained with the methodology used in this case-study, which states that walkways play an important role (economic, social and recreational) in the landscape and in the development of villages in the interior of Portugal.

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