

## The Montado Great Route Sustainable tourism: threats and opportunities

C. Carriço

*CIMAC (Comunidade Intermunicipal do Alentejo Central), Évora, Portugal*

T. Batista

*CIMAC and ICAAM (Instituto de Ciências Agrárias e Ambientais Mediterrânicas), Department of Landscape, Environment and Planning, University of Évora, Évora, Portugal*

P. Mendes

*CIMAC (Comunidade Intermunicipal do Alentejo Central), Évora, Portugal*

J. M. Mascarenhas

*CIDEHUS - University of Évora, Évora, Portugal*  
*UNESCO - Intangible Heritage, Évora, Portugal*

**ABSTRACT:** Montado landscape is a highly valued agro-forestry-pastoral system protected by law and integrated in the Portuguese National List for Cultural Landscape World Heritage of UNESCO. It provides important environmental and cultural functions and services. These types of multifunctional landscapes are very attractive for sustainable tourism, like walking, birdwatching and other leisure activities. Alentejo Central is covered by montado landscapes (cork oak and holm oak trees) in about 50% of its area. In 2016, the Comunidade Intermunicipal do Alentejo Central (CIMAC), decided to implement a walking path network that connect the main villages and rural landscape and their cultural and natural heritage. The Montado Great Route (GRM), is planned for more than 1.000 km and connects natural, scenic, architectural and cultural values that everyone can enjoy walking through the landscape. These paths connect also with the contiguous regions namely to Alto and Baixo Alentejo, Vicentina Coast and Spain.

### 1 INTRODUCTION

#### 1.1 *Montado, a heritage landscape*

Montado is the most important multifunctional agro-forestry-pastoral system in the south of Portugal, not only concerning its biological diversity, but also its cultural heritage.

It is a typical mediterranean land use system composed mainly by holm oak (*Quercus rotundi folia*) and cork oak (*Quercus suber*) open formations that have, under the tree layer, rotation of crops, fallows and pastures, where small and large game species can be found and several wildlife persists. These “montados” are also quite diverse in its horizontal and vertical structure and tree coverage density (Batista, 2014) (Fig. 1).

The montado as an agro-forestry-pastoral system is described in municipal regulations since the 16<sup>th</sup> century, showing the existence of cereal breeding under arboreous cover. The continuous sustainable use of this ecosystem allowed the persistence of the multiple natural and cultural heritage perceived today. Cork and holm oak trees are protected trees since 1999 (Decree-Law 140/99, April 24 – Annex B-1 republished by Decree-Law 49/2005, February 24; Directive 92/43/CEE, May 21 – Annex I; Decree-Law 169/2001, May 25, with alterations; Decree-Law 155/04, June 30) and montado landscape is in the Portuguese national list for the UNESCO World Heritage 2016– Cultural Landscape application. This biocultural formation is ‘one of the most aesthetically pleasing and biologically rich landscapes in Europe’ (Pinto-

Correia & Mascarenhas, 2001). According to the World Heritage Convention classification, montado landscape is clearly a type of continuing landscape.

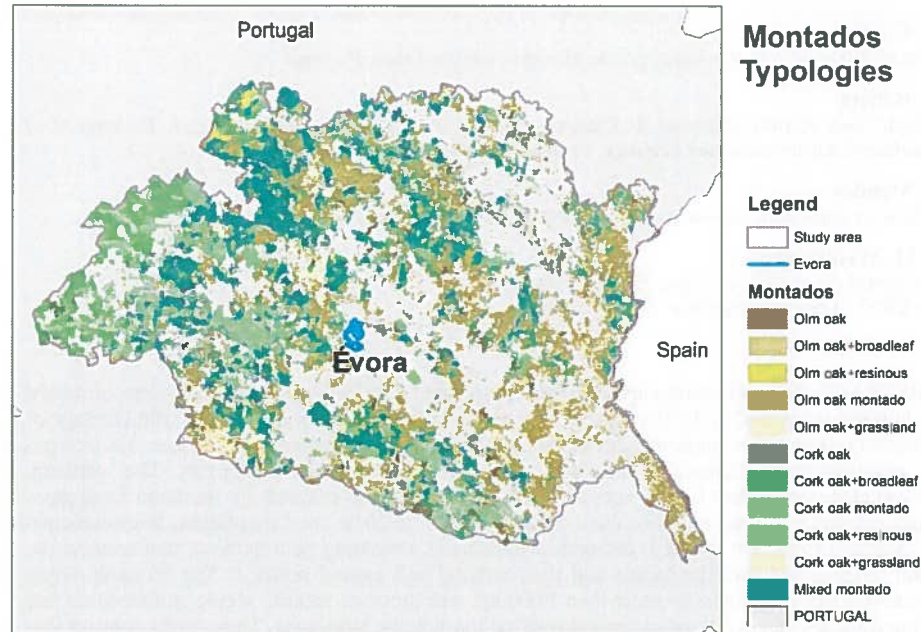


Figure 1. Montado typologies in the study area (Batista 2014).

### 1.2 Functions and services of Montado's landscape

Montado is a High Nature Value (HNV) farming system according to the classification proposed by the European Environmental Agency for agricultural and silvo-pastoral systems that, for its extensive nature or diversity, promotes nature conservation (Pinto-Correia in Pereira et al., 2015). Montados landscapes integrate production with biodiversity conservation, culture and identity values. Batista et al. (in press) identified the most important montado's ecological functions and products, goods and services provided by this landscape. The main ecological functions identified were: soil protection and enrichment; water flow regulation; CO<sub>2</sub> capture; air quality and climate regulation; biodiversity and wild-life habitat provider (shelter and food) and resilience and adaptation capacity. As goods, products and services, depending on man intervention in the ecosystem, were identified: forestry products such as cork, wood, charcoal and acorns, mushrooms and aromatics plants; livestock breeding - cattle, pigs, sheep, goats; game hunting (small and big game species); landscape aesthetics for leisure and ecotourism; artistic inspiration; biological, cultural and intangible heritage; educational, recreational and research pool. The multi-functional economic activities are inherent to montado systems nature, however, to increase profits, the owners are gradually incorporating new services connected with rural recreation and tourism. The rural landscapes can be evaluated for their bucolic and aesthetic aspects, with no acknowledgment of the role of farming (Pinto-Correia et al., 2008). This is the expectation shared by foreign visitors staying generally for relatively short periods, who walk or go on bicycle or horse tours in this landscape. They can catch an impression based on the aesthetical and environmental quality of the landscape and appreciate natural and cultural heritage.

The cultural heritage present in montado does not only cover the tangible elements but also the intangible ones. Many montado intangible heritage values have a great potential for rural

tourism development, like craftworks, gastronomy, local traditional and popular knowledge, legends and beliefs and artistic inspiration.

The definition of small and great walking routes or trails is one of the most positive practices of recreation in this landscape that is now boosted by the local administration.

## 2 INSTALATION OF WALKING PATHS AND MONTADO ENHANCEMENT

Europe is changing quickly, giving opportunities for nature today than for the past centuries. One of this causes are new transformation in land-use, a unique circumstance driven by three major forces: a strong migration of-in particular younger-people to the cities, intensification of agricultural use on the most productive soils, and, at the same time, large scale land abandonment in more remote areas (Helmer W. et al 2015). Ecotourism and walking emerges like a great opportunity for this ecosystem conservation, and rural development. The installation of walking paths through montado landscapes will favor users' contacts with the multifunctional characteristics and activities of these agro-silvo-pastoral systems and, in particular, their natural and cultural heritage values (Kastenholz & Figueiredo, 2014; Surová & Pinto-Correia, 2009).

The increase in the users' awareness of these values, resulting from the experiences, allows the raise of public interest for conservation of these heritage landscapes (Surová & Pinto-Correia, 2008). On the other hand, the users of such pathways will contribute to the socio-economic revitalization of these regions, largely depressed by emigration to large urban centers (Richman, 2011; Farina, 2000).

This revitalization will contribute to support commercial activities in the villages and farms in the proximity of the tracks favoring diverse activities, in particular related to eco-tourism and rural tourism (Pérez Soba et al, 2007).

Finally, the aspects related to the increase of the well-being of the users of the paths, in their multiple aspects (Corvalan et al. 2005; Gobster et al., 2007; Gaillet-De Chezelles, 2010; Saraiva, 2014), should be mentioned. Being largely associated with the landscape, this will become an increasing focus of social attraction with implications in the different aspects already mentioned above.

Of course, the continuous pedestrian activity through this network of routes will not only have positive impacts, as cited above, but also negative, especially on ecosystems and archaeological structures, so it will have to be analyzed very carefully measures mitigating such impacts to improve the sustainability of the process (Hawes et al., 2006; Vias Mar-tínez & Ocaña Ocaña, 2014; Samia et al., 2017).

## 3 METHODOLOGY

### 3.1 Study area: the Montado Great Route (GRM)

The GRM is an intermunicipal project located in Alentejo Central region, in the south of Portugal. It aims to join 14 municipalities covering a total area of 7400km<sup>2</sup>, through a unique infrastructure of leisure, culture and informal sport, which ensure connection between the main villages and towns linking at the same time important natural, and cultural heritage values of the region.

It is mainly a pedestrian route, allowing also bike and horse rides. It has approximately 1130km, divided into 113 sections of less than 20km<sup>2</sup>, integrating not only the connections between villages but also the links to the surrounding territories: coastal and northern Alentejo and Spain, as it can be observed in Figure 2.

Alentejo Central is a typical Mediterranean region, and almost 50% of its area is composed by montado (Fig. 1), so one of the main objectives of the route is to connect Central Alentejo areas passing through the main towns and villages and by heritage sites, with emphasis to montado landscape.

As referred previously Alentejo Central is also very rich in natural and cultural heritage, such as Natura 2000 sites and archeologic and architectonic heritage monuments, which are very pleasant to walk through (Fig. 2).

The main objectives of the GRM project are:

- To implement an infrastructure suitable for the practice of walking and enjoyment of the territory;
- To invite the visitors to explore the region, enjoying its natural, scenic, and cultural heritage;
- To boost the identity of the region either by creating the infrastructure or the enhancement of the associated resources, including montado;
- To promote the soft mobility and connectivity between the villages and towns of Central Alentejo and adjacent territories;
- To reinforce municipal associations and inter-institutional cooperation;
- To promote sustainable tourism and local heritage;
- To promote local resources and commerce;
- To contribute to the perception of the rurality and its natural and cultural resources values.

There is a reinforcement of the main subject of this great route as it is framed by Regional Tourism Entity (ERTAR) proposal of the Montado Cultural Landscape to UNESCO Cultural Heritage. The classification as a "cultural landscape" provides the opportunity for integrated interventions in this agro-silvo-pastoral system, converted to benefits to social economic sustainability and local competitiveness and increasing sustainable tourism associated to the sustainable use of resources.

GRM will promote the existing resources and affirm the territory, creating dynamics that contribute to an integrated and sustainable development.

The implementation of this infrastructure is of particular relevance to the municipalities, local populations and tourism. It promotes an environmentally sustainable product with several application areas: sport, leisure and wellbeing, heritage and tourism, soft mobility for local population.

#### 4 GRM DESIGN

The path network of GRM was structured with a diversified logics but unifying the characteristics of the territory. GRM is the regional backbone of the existing or projected pedestrian network routes in the municipalities of Alentejo Central, complemented with the existing local small networks.

In order to ensure the guidelines of the Portuguese Federation of Camping and Climbing, it were defined 20kms as average extension for the pedestrian route sections, allowing the access and completing for all type of practitioners of the modality, being more or less experts. It was given prevailing choice to the use of public routes, using private ones only when no alternative were available. In that case it was necessary to have the authorization from the land owners.

The starting and ending points of the 113 stages were defined in villages and towns which support the logistics for walkers (resting and feeding), but also as places to experience the local culture and gastronomy. It were projected small bridges and stream passages, field signalization and man passages in fences.

In summary, the premises supporting the design of the GRM were:

1. Connection of the 14 main towns of Alentejo Central through walking paths;
2. Sections of the path network with no more than 20kms, which is the normal length that a walker make in a journey;
3. Having starting and ending points in villages and towns, which have logistic support (resting and feeding points) for hikers/ users;
4. To use mainly public domain pathways, avoiding legal problems with farmers and property owners;
5. To integrate natural and built heritage interest points in the pathways;
6. Use montado as main GRM subject, reinforced by its application to UNESCO Cultural Heritage.

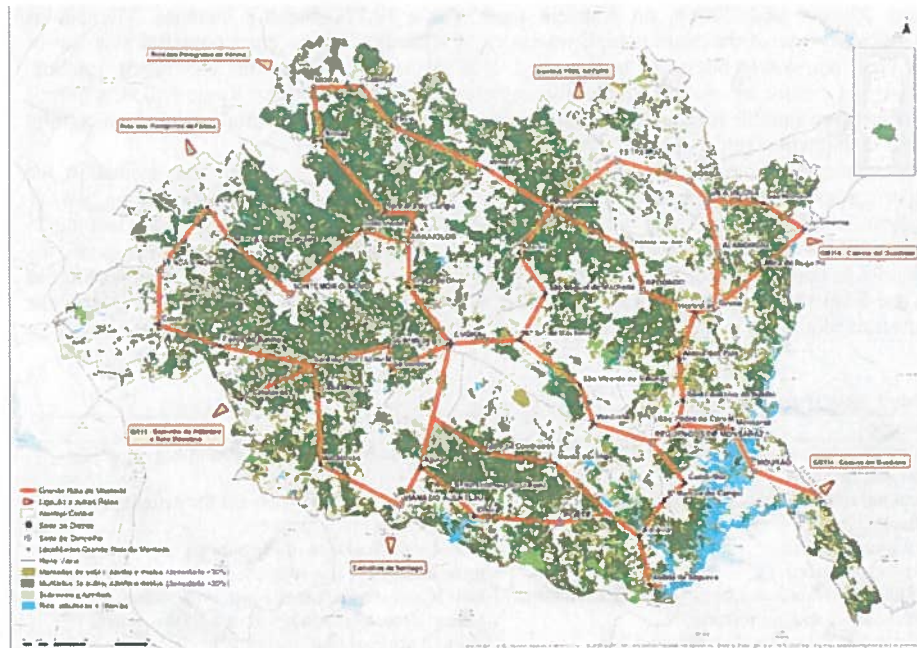


Figure 2. Montado Great Route Schema – Alentejo Central region.

The design process involved a multidisciplinary team, composed by architects, engineers and municipal technicians and was developed in three phases:

- Preliminary studies - emphasizing the main points of interest (POIs) to draft proposals and discussion with the municipalities' decision makers.
- Base Project - clarifying aspects of the proposed solutions, identifying the actions to be carried out and main constraints, written and drawn pieces with typologies and location of the constructive solutions: small bridges and polders in river streams.
- Technical Project - phase that contains all the information related to each municipality: context, territory characterization and identification of the existing heritage values; concepts, general principles and specific aspects of the proposal for the implementation of the Great Route; characterization of each section and their particularities, and finally, legal aspects related to administrative permits to interview in the territory, like the public utility classification applied to streams, National Agricultural Reserves, National Ecological Reserves, classified built heritage sites and NATURA 2000 sites.

It wasn't possible to trace all paths in public domain, so it was necessary to obtain permissions from the land owners.

## 5 STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS OF THE ROUTE IMPLEMENTATION

Ecotourism, whatever definition, is a mastermind of transformation. It is inevitable that the existence and permanence of tourists in areas occasionally visited by foreigners will create demands upon the environment connected with new actors, activities, and facilities. Ecotourism will forge new relationships between people and environment, and between peoples with different lifestyles. It will create forces for both change and stability. These forces act at a diversity of scales from global to local (Wall, 1996).

According Reuters' agency, in 2016, the number of foreign tourists in Portugal soared nearly 13 percent exceed 10 million for the first time. Although the main destinations in Portugal still



being Algarve and Lisbon, on Alentejo there was a 12.7% tourist's increase. Montado is undoubtedly one of the main natural resources of Alentejo, having great potential as a tourist resource that slowly begins to be explored. Due to the diversity of this ecosystem, tourism, nature and culture are associated with this region, where Montado Great Route will be a unique infrastructure suitable for the practice of walking, enjoying montado natural, scenic, and cultural heritage that will create many task forces for change on this territory.

Strengths, weaknesses, opportunities and threats (SWOT) analysis, that evaluates the opportunities, threats, strengths and weaknesses of an organization, is the most common. SWOT analysis is a key support tool for decision-making, and is frequently used as an income to analytically evaluate projects' internal and external environment. By identifying its features, it's possible to built strategies upon the strengths, eliminate weaknesses, and exploit opportunities or use them to counter the threats (Yüksel & Dadivaren, 2007). In this sense to evaluate the impact of Montado Great Route a SWOT analysis was performed:

Table 1. SWOT analysis.

Strengths	Weaknesses
Unique Mediterranean landscape with protected trees and habitats; Great natural (biologic and geophysic) and cultural (tangible and intangible) heritage; Vast historic heritage; Territory connectivity; Biodiversity (fauna and flora ) and a great natural values associated to montado; Good infrastructure and communication networks; Proximity to the main tourism markets; Connectivity to spanish and other portuguese walking routes; Unlimited hospitality of portuguese rural dwellers; Changes in the preferences of tourists; Increase and diversification of tourist supply; Commitment of municipalities to regional development; Proximity to Unesco heritage city; Climate with high number of sunny days;	Lack of involvement and commitment of private owners; Prohibition of local owners for the installation of paths in their properties; Logistic difficulty in implementing an infrastructure of this magnitude; Low human resources to route implementing; Safety issues on certain sections of the routes; Lack of scale of tour operators; Lack of accommodation for tourism; Depopulation and population aging;
Opportunities	Threats
Development of new tourism products associated with the route; Tourism increase in the territory; Greater conservation of montado areas; Valorization of local products; Increased economic value for the region; Increase of the companies of the territory; Decrease in population aging; Incensement capacity for innovation in tourism and associated services and goods; Valuation and protection of the functions and services provided by montado; Synergies between public and private institutions for the development of the territory; Enhancement of rural populations and their culture;	Difficulty in maintaining the route; Political and social demotivation by the project; Destruction of part of route connections due to private land owners; Impact of climate change on tourism; Lack of commitment of public institutions in route promoting; Lack of human resources with capacity to boost the territory; Lack of scale and capacity of tour operators to get the route; Environmental degradation; 'Touristification';

The SWOT analysis demonstrates the socioeconomic and environmental importance that the Great Montado Route will have in this territory. In a territory such as Alentejo that currently suffers great problems of economic marginalization with the loss of population and aging of it,

this can be an excellent instrument for valorization and territorial connection. On the other hand the walking tours are excellent inspirational elements that should promote nature's valorization and conservation. However, due to the increasing pressure, it is necessary to caution the route touristification, as well as to promote a planning and management of the impacts that the gentrification of the territory may have. In order for there to be a real success in the implementation and future of the route, it is important that all agents and actors in the area make a serious commitment to the operation of the route. The agents and tour operators as well as the involvement of the private owners is the basis of success of this project if they are not involved and realize the true value of the project, it is not possible to work.

The montado is an ecosystem with thousands of years old, with a very high environmental value, which needs to face the growing threats of abandonment, and changes in the use of the soil to be protected and valued, being ecotourism a tool of great potential for its conservation. This project could aim to contribute to the sustainable development of this region and to boost local communities, to generate dynamics and fair commerce in the rural space contradicting depopulation. In this paper are presented the characteristics of the Montado Great Route and identified the main threats and opportunities of its implementation.

## REFERENCES

- Batista, T., Mascarenhas, J., Mendes, P. & Pinto-Gomes, C. 2014. Methodological proposal for the assessment of vegetation heritage value: application in Central Alentejo (Portugal). In I. M. Silva, T. P. Marques & G. Andrade (Eds.), *Landscape: a place of cultivation. Book of proceedings of ECLAS Conference Porto 2014*. Porto: School of Sciences –University of Porto: 266-270.
- Batista, T., Mascarenhas, J. M. de & Mendes, P. 2015. Guidelines for the integration of biological and cultural values in a landscape interpretation centre: application in southern Portugal. *Biodiversity and Conservation*, 24(13): 3367-3386.
- Batista, T., Mascarenhas, J. M. de, Mendes, P. & Pinto-Gomes, C. 2018. *Assessing Vegetation Heritage Value: Application in Central Alentejo - southern Portugal. Landscape Research*. In Press.
- Corvalan, C., Hales, S. & McMichael, A. J. 2005. *Ecosystems and human well-being: health synthesis*. Geneva: World Health Organization.
- Farina, A. 2000. The Cultural Landscape as a Model for the Integration of Ecology and Economics. *BioScience*, 50(4): 313-320.
- Gaillet-De Chezelles, F. 2010/1. Wordsworth, a Wandering Poet: Walking and Poetic Creation. *Études anglaises*. 63: 18-33.
- Gobster, P. H., Nassauer, J. I., Daniel, T. C. & Fry, G. 2007. The shared landscape: what does aesthetics have to do with ecology?. *Landscape Ecology*, 22: 959-972.
- Hawes, M., Candy, S. & Dixon, G. 2006. A method for surveying the condition of extensive walking track systems. *Landscape and Urban Planning*, 78: 275-287.
- Kastenholz, E. & Figueiredo, E. 2014. Rural Tourism Experiences. Land, sense and experience-scapes in quest of new tourist spaces and sustainable community development. *PASOS*, 12 (3), Special Issue: 511-514.
- Pereira, P., Godinho, C., Roque, I. & Rabaça, J. 2015. *O Montado e as Aves: Boas Práticas para uma Gestão Sustentável*. Coruche: Câmara Municipal de Coruche and Évora: Universidade de Évora.
- Pérez Soba, M., San Miguel, A. & Elena-Rosselló, R. 2007. Complexity in the Simplicity: The Spanish dehesas. In B. Pedrolí, A. Van Doorn, G. De Blust, M. L. Paracchini, D. Wascher & F. Bunce (Eds.), *Europe's living landscapes. Essays on exploring our identity in the countryside*, 369-384. Zeist: Landscape Europe/ KNNV.
- Pinto-Correia, T., Barroso, F., Menezes, H. & Taveira R. 2008. Synergies and conflicts between agriculture and noncommodity functions at local landscape level: application to Castelo de Vide, South-East Portugal. *Proceedings of the 8<sup>th</sup> European IFSA Symposium*, Clermont-Ferrand, 6 – 10 July 2008: 571-579.
- Pinto-Correia, T. & Mascarenhas, J. M. 2001. Montado (Dehesa) of Portugal and Spain. In B. Green & W. Vos (Eds.), *Threatened Landscapes. Conserving Cultural Environments*, 100-101. London and N. York: Spon Press.
- Pinto-Correia, T., Ribeiro, N. & Potes, J. (Eds.). 2013. *Livro Verde dos Montados*. Évora: ICAAM. Available at: <https://dspace.uevora.pt/rdpc/bitstream/10174/10116/1/Livro%20Verde%20dos%20MontadosVersao%20online%20%202013.pdf> [Accessed on 15 Octobre 2016].
- Richman, E. 2011. *Economic benefits of trails*. Harrisburg: Pennsylvania Land Trust Association.

- Samia, D. S. M. et al. 2017. Best Practices Toward Sustainable Ecotourism. In D. Blumstein, B. Geffroy, D. Samia & E. Bessa (Eds.), *Ecotourism's Promise and Peril*, 153-178. Springer, Cham.
- Saraiva, M. G. 2014. Paisagem de Montado. A experiência de encontros de pintura 'en plein air'. *Memória Alentejana*, 33/34: 47-48.
- Surová, D. & Pinto-Correia, T. 2008. Landscape preferences in the cork oak Montado region of Alentejo, southern Portugal: Searching for valuable landscape characteristics for different user groups. *Landscape Research*, 33(3): 311 - 330.
- Surová, D. & Pinto-Correia, T. 2009. Use and assessment of the 'new' rural functions by land users and landowners of the Montado in southern Portugal. *Outlook on agriculture*, 38(2): 189-194.
- Vías Martínez, J. & Ocaña Ocaña, C. 2014. Multicriteria evaluation by GIS to determine trail hiking suitability in a natural park'. *Boletín de la Asociación de Geógrafos Españoles*, 66: 323-339.
- Wall, G. 1996. Ecotourism: Change, impacts and opportunities. *Bulletin Series. Yale School of Forestry & Environmental Studies*, 99: 108-117.
- Yüksel, İ. & Dadiyaren, M. 2007. Using the analytic network process (ANP) in a SWOT analysis—A case study for a textile firm. *Information Sciences*, 177(16): 3364-3382.