Herdade da Contenda A tale of resilience for Nature

Descriptive document

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1. Introduction

The Contenda Estate (Herdade da Contenda) is a successful example of recovery and appreciation for a Mediterranean landscape arising from the implementation of a policy of excellence, focused on sustainable management and esteem for its endogenous resources, seeing landscape as a territorial resource.

In 2020, the Contenda Estate was the winning project in the 3rd National edition of the Portuguese landscape award out of a total of 25 applications.

This project is an example that demonstrates how, over the centuries, the interaction between Humankind and Nature can contribute to construct, destroy and reconstruct landscape, bringing back its functions of support to biodiversity as a universal asset.

The Contenda Estate covers a territory of around 5,270 hectares at present. It is a State owned property (belonging to the Local Municipality), situated on the left bank of the Guadiana River, having its frontier with Spain for 21 km has and is part of the Moura Local Authority. (Figures 1 and 2).

The bordering Spanish territory belongs to the Aroche and Encinasola Municipalities, is a larger unit of 7,000 hectares, maintaining its public management which goes back to the period of "The Great Dispute", a time in which the property had still not been divided between the two countries.



Figures 1,2 - localization of the territory and landscape

It is a territory with Mediterranean characteristics that at present, following the implementation of a set of defined actions integrated within landscape policy, is covered with high quality scenery, being of enormous importance for the balance of the ecosystems integrated within it and for the socio-economic development of the region.



Figures 3,4 - High quality scenery in Contenda Estate

2. Contenda Estate - a cross-border landscape, with more than six centuries of History

The importance of this territory goes back to the Middle Ages (13th century).

Initially having more than 12,000 hectares, the territory that made up the Contenda Estate, known as the "Great Contenda", was managed as a community project and included grazing woodland, the cultivation of cereals, grazing land and also acorn and cork production. Due to its cross-border setting it was the object of disputes between the Portuguese and Spanish for more than six hundred years, which justifies the origin of its name, "Contenda - Dispute" kept until the present day - Contenda In Portugal and Contienda in Spain.

In terms of settlement during the Middle Ages and the following periods, it was settled with a very particular community lifestyle, very much rooted within the populations, a community living from collective pastureland management for their animals: on the Castilian side the inhabitants of Aroche in Andalusia and Encinasola in Extremadura and those of Moura on the Portuguese side.

The 1542 Treaty, an agreement between the kingdoms of Portugal and Spain, was the first document about the management of "The Great Contenda", with established regulations for the use of pasturelands, only authorized for the inhabitants of those

towns and also the banning of cereal plantations for bread, the cutting down of trees namely the cork and holm oaks for whatever reason, the construction of sets of beehives, sheep pens, pigsties, houses for living in or any type of buildings.

But despite these regulations, the "Great Contenda" was the setting for rivalries and conflicts until 1893, when the property was divided after the signing of the Treaty of Madrid. Two parts resulted from that great property, one for each country, in an agreement that fixed the boundaries of one and the other and part of the frontier which still needed to be drawn. Once peace was established between Portugal and Spain, the Contenda Estate continued to carry out an important role in cross-border relationships: it was a refuge for the Republicans during the Spanish Civil War (1936 - 1939) and the setting for smuggling as a subsistence economic activity where various "Canteens" were constructed near the border, precarious structures for small trade between the Portuguese and Spanish of some consumer products, still visible along the border line today.

However, after the division of the Great Contenda, Moura's Local Authority, having no means to manage almost half a dozen thousand hectares of the Estate, decided to hold a public auction in order to lease the land in lots.



Figures 5,6 - Tenants in Contenda State (1940-50)

Regulations were established to make the most of land, some areas being left fallow (barbecho in Spanish) and others slashed, the Contenda Estate being divided into 3 equal areas.

The tenants cultivated wheat, barley, oats (grass) and rye and also promoted goat, sheep and pig farming. As a result of the Portuguese State agricultural policy, known as the Wheat Campaign that continued during the 30s, 40s and 50s of the 20th century the land became over worked. So it became exhausted, degraded, there was soil loss,

all characteristic of the desertification process with its corresponding low production. Agricultural activities declined and in the end were abandoned at the beginning of the second half of the 20th century, leading to the abandonment of the territory.

The abandonment of agriculture led to the tenants migrating, as that taken from the land barely paid the respective rent.



Figures 7,8 - Degraded landscape in 1965 (left) and fifty years after (right)

The last time the land was leased was in the period from 1957 to 1963 but, due to the tenant not carrying out the contract's clauses, this lease was interrupted as more than 900 large adult holm oaks were felled in 1958 and around 1,050 of the same in 1959.

In 1957 there were more than 300 people working and living in Contenda. In 1983 there were around 110 workers, reduced to only one couple and their two children in 2000 (the shepherd and family)

3. The Landscape of the Contenda Estate

The Contenda Estate is made up of an example of a "montado/dehesa" landscape, a system of great relevance in ecological, economic and social terms. It is a traditional agro-sylvo-pastoral land system made use of by the community, with an oak (*quercus*) tree lined stratum in diverse densities that produces a set of benefits for the ecosystem. Furthermore, it is situated in the area of Portugal where the greatest impacts associated with climate change are felt, especially the increase in the scarcity of water and land degradation. This system carries out very important functions in soil conservation, the regulation of the hydrological cycle and the removal of carbon from the atmosphere. It is also presented as a specific Mediterranean forest ecosystem, extremely rich in biodiversity and identified as being the most important for the conservation of Nature, both on a national and European level.



Figure 9 - Montado/dehesa landscape

Regarding landscape character, the Contenda Estate is included in a unit of landscape marked by the dominant presence of the Holm oak (*Quercus rotundifolia*) in extensive, continuous areas with a low density of its tree cover and often of its shrub stratum. The "montados" and other extensive uses have maintained a relative protection of the soil already degraded by intensive erosive processes (dominated by skeletal schist soils). Three sub-units of landscape can be distinguished by their characteristic biophysics in this vast territory:

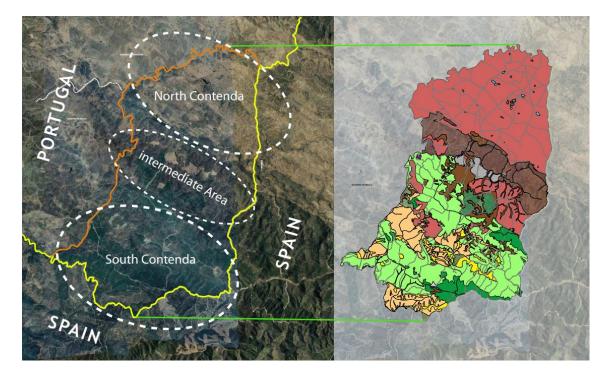


Figure 10 - Three sub-units of landscape in Contenda Estate

The first, designated as North Contenda, is characterized by a more flattened relief, dominated by the Holm Oak "montado" with its agro-sylvo-pastoril exploration, which is also used to feed the red deer.

The second, designated as the Intermediate Area, is marked by the valley of the Murtigão River, a river that crosses the property, essential for the maintenance of the ecosystems. Here areas of more or less diverse scrub land predominate with Holm Oaks on the North facing slopes.



Figures 11,12,13 – North Contenda (A), Intermediate Area (B), South Contenda (C)

The third, designated as South Contenda, is characterized by a more pronounced relief that corresponds to the Western most point of the Serra Morena in Spain, with altitudes higher than 400 meters and a densely wooded territory with a variety of tree species.



Figure 14 - South Contenda reaches almost 600 m. Strawberry trees under maritime pine

All this landscape is in general marked by great dryness, due to low annual rainfall, concentrated in the Autumn/Winter and the extreme harshness of Summer.

Waterlines, here the Murtigão River takes on special importance, profoundly rip apart the relief with a strong impact on the landscape where particular elements stand out, like the quartzite ridges and an unusual area of some hundreds of hectares of cork oaks with the cork still present, possibly the only one in the world.



Figures 15, 16 - Murtigão River



Figures 17, 18 - Quartzite ridges



Figures 19, 20 - Tomina Convent, traditional apiary

In terms of heritage, the presence of the Tomina Convent should be noted, a religious structure constructed in the 18th century, resulting from human intervention in communion with Nature, where rock is both the landscape and the raw material for construction.

The Convent walled "vegetable gardens" are within the Estate and include bread ovens, animal pens a noria and a cistern.

4. Landscape Policy - To reconstruct and give value to the Contenda Estate.

All the course of events that the Contenda Estate experienced along the centuries, culminated in its degradation due to inappropriate agricultural practices, mainly cereal production associated with management that focused on productivity and a significant demographic reduction.

The need for intervention supported on giving value to the landscape became evident within this reality, intervention that allowed for the recovery of the soil, via reforestation, the requalification of its values and making the most of its endogenous resources in a sustainable fashion, giving back to the community and enhancing its enormous potential of scenic and functional quality that characterizes it today.

4.1. The beginning of the way to sustainable territorial development (from 1958 to 2010). The recreation of various landscape elements.

At the end of the 50s (1958), the Forest Services, now known as the Institute for the Conservation of Nature and Forests, intervened in the Contenda Estate and it was submitted to the optional partial forest regime. For the following intervention it was decisive that the property be kept intact, that it belonged to the State (municipality) which happened both in Portugal and in Spain, a curious parallel in its historical development.

In 1958, the Forest Services have drew up the first Afforestation Project at Contenda Estate for the south area of Murtigão river, which has represented the first step in the recovery of degraded soils and the landscape.

Apart from its recovery via the forestation process, especially in relation to the holm oak, stone pine and cork oak, the silvo-pastoral exploration promoted, also by the Forest Services, the introduction and upkeep of groups of traditional Portuguese pure breeds. Furthermore, bee hives were installed, grazing land was improved and management of big game hunting (red deer, wild boar and European Mouflon, emerged in the 90s of the last century) was set up. These practices were implemented for a period of about 50 years which introduced significant alterations to the landscape, transforming land cover and creating habitats associated with the exploration and appreciation of the resources present in the territory.



Figures 21, 22 - traditional Portuguese breeds in Contenda: Serpentine goat and black Merino sheep



Figures 23, 24 - Management of big game and beekeeping

In addition to actions to restore ecosystems and the landscape, the Forest Services have, over the years, built a set of buildings to support the activities developed on this territory, as well as houses for employees and guards. Infrastructures were also built to allow for easier access and storage of water, a very scarce natural resource in these areas, especially in the summer months.

At the beginning of this process of landscape recovery in the Contenda Estate, apart from forestation, an integrated reserve of around 411 hectares was marked out within an area of biophysical weaknesses where, since 1963 any intervention on the fauna or flora has been restricted, promoting the regeneration of the characteristic landscape of this Mediterranean territory and soil protection.

Also at this time, the exceptional conditions for the creation of a game reserve were recognized, the importance of which justified State management and Contenda's forest perimeter was declared a National Hunting Area.

This landscape policy managed to guarantee coherence of land use, consistent with the balance between the systems of Nature and their respective exploration.

Amongst the practices adopted now are the protection of natural regeneration, reforestation, adequate scrub clearing and the sowing of grazing land, sanitary improvement, the clearing of the areas of cork, holm oak and pines and the protection of forests against wild fires (clearing of the divisional network and improvement of the road network) and soil and water conservation.

After a period of high state investment, intervention in the Contenda Estate was drastically reduced from the end of the 90s of the 20th century as a result of the unfavourable national context. This disinvestment naturally put some of the plans already started to save the landscape at risk. However in 2000, the Contenda Estate became part of Nature Network 2000 Rede Natura 2000 and in 2006 an Ordering and Management Plan was established for the estate.

4.2. Appreciation and consolidating exemplary value. From 2010 to the present day

Following this critical moment in the Contenda Estate's history, the Moura Local Authority, once again took on the management of this territory, from 2009 to 2011, overseeing its existing rich landscape heritage. This culminated with the creation of the Contenda Estate Municipal Company in 2012. The alteration in management was committed to maintain the property as a public utility.

In 2010, the Contenda Estate was considered one of the places of interest within the work integrated in *Long Term Ecological Research* due to its diverse landscape, scenic interest and the recovery of its biodiversity, this being a platform of communication, documentation and collaboration amongst scientists developing research on the environment. Aiming to take on sustainable landscape management once more, an Ordering and Management Plan was implemented with its focus on landscape, forest and the environment.

Thus, in 2012 the Contenda Estate became one of Moura's Local Authority's projects of reference, exemplary of the various areas of intervention in the different parts of

the landscape, re-centering intervention in the Contenda Estate around the following aims:

- a) The promotion of urban and rural development, as a necessary link between social and environmental value and economic and financial sustainability;
- b) Upkeep and further increase of forest management;
- c) Upkeep and appreciation of biodiversity;
- d) The promotion of sustainable use of natural resources;
- e) The promotion of scientific research;
- f) The promotion of Nature and other tourist activities, compatible with the Estate's values for Nature.

In this period, the implementation of the following measures is to be highlighted:

- The elaboration and implementation of a landscape intervention strategy;
- Tree planting, aiming to reinforce the montado ecosystem;
- The removal of the existing cattle herd which has proved to be incompatible with the preservation of the montado landscape;
- The purchase of vehicles and intervention machinery for the management of tree and herbaceous cover;
- The recovery of various buildings to be used by visitors and researchers;
- The installation of a support centre for riding activities;
- The promotion and carrying out of educational awareness raising training sessions and events dealing with landscape values;
- The promotion of activities related with Nature tourism in the Contenda Estate, as seen in several dozen tours and initiatives carried out since 2012;
- The setting up of a Human Resources list with technical staff in the crucial areas of landscape management in the Contenda Estate;
- The production of publicity and awareness raising material about the landscape in the Contenda Estate;
- Participation in events to publicise the Contenda Estate's landscape;
- The creation of the Contenda Estate's management, consulting and supervisory bodies, including a Technical and Scientific Board;
- The elaboration and availability online of an official Contenda Estate webpage (www.herdadedacontenda.pt)
- Rehabilitation of the disused school as the Municipal Company's Headquarters.

4.2.1. Public Participation and Awareness in the decision making process

Public participation, as a process of community involvement, has been manifest in various activities over time, both in the presentation of projects, plans and programmes for the community, as well as the implementation of initiatives to promote the collection of opinions and contributions for management of this landscape and the identification of future challenges that will have to be faced. For these ends, events with the community have been organized, the meeting dedicated to the theme "Reflection on the future of Contenda" to be highlighted.

The results of these initiatives have been used to define priorities on a landscape management level and activities that should take place there.

Projects to be implemented via European funding have also been presented to the community, with emphasis on projects related to the LIFE programme (European Union financing for environmental and climatic undertakings) highlighting the project for the recovery of Iberian lynx habit and that, too, of the cinerous vulture, both species in danger of extinction in the Iberian Peninsula, and also for the conservation project on the Iberian minnow carp (Saramugo), the smallest fish in the fauna of the Guadiana basin.



Figures 25, 26 - Meetings - public meeting and vulture specialist group

The Contenda Estate also promotes Nature conservation initiatives for public participation (e.g a public vote for the name of the cinerous vulture) and the strengthening of Institutional links with local entities (Moura Municipality, Union of the Parishes of Safara and Santo Aleixo da Restauração, Barrancos Municipality, The Association of Voluntary Firemen, COMOIPREL and Vale do Guadiana Beekeeping

Association) and with regional/national Institutions (ICNF, GNR/SEPNA, LPN, Teaching and Professional Training Institutions amongst others);

In parallel, being a privileged space for raising society's awareness for the value of landscape, the Contenda Estate has been the stage for the implementation of various awareness raising initiatives, including making management practices known within a Mediterranean environment. The training centre "Hunting and Biodiversity Conservation" contributes to the training of many young people on themes related to activities that take place on the Contenda Estate, being used as a learning "laboratory".

Various initiatives of cooperation with institutions linked to Teaching and Professional Training have been set up since 2012, noting various field trips by these institutions and also hosting professional traineeships.

The Contenda Estate is also stage for experimental activities and training in the area of forestry, integrating contents of public awareness, involving the Local Authority and other relevant entities for the management of that territory.



Figures 27, 28 -Visitors in Contenda and Consulting Board

Furthermore, there is a Technical and Scientific Board and a Consulting Board for the Hunting Area, which, as bodies, equally assure society's participation in the management of the Contenda Estate.

5. Landscape of Reference on the frontier

The results of this persistent landscape policy, continuous cover time, show recovery and revitalization of a territory which has become sustainable and multifunctional and within which biodiversity patterns are relevant. The fauna and vascular flora survey and that of the Contenda Estate's habitats carried out in 1996 and 2007 confirmed the rich biodiversity, registering 133 bird species, 18 species of mammals, 13 species of reptiles, 10 species of amphibians, 3 of fish, 447 species of plants of which include various endemic species (4 Lusitanian, 24 Iberian) and furthermore 10 natural habitats of E.U interest.



Figures 29, 30 - Rare species in Contenda: cinerous vulture and European pond turtle

Amongst the results achieved regarding biodiversity, special relevance is given to an important colony of cinerous vultures, estimated to be around 10 breeding pairs and the presence of an important population of free roaming Iberian red deer *Cervus elaphus ssp. Hispanicus*.



Figures 31, 32 -Iberian minnow carp cinerous and habitat 9340 (Holm oak forests)

The recovery of the degraded areas with the planting of around 3 thousand hectares of forest, planted more than 50 years ago, was the most notorious intervention in the landscape. From the predominance of fallow land and degraded agricultural areas on the initial surface, the Contenda Estate now presents an area of 1,941 hectares of

Holm Oak, 464 hectares of Cork Oak, 1.471 hectares of Stone Pine and 220 hectares of Maritime Pine forest

The upkeep of the area of unharvested cork oaks, perhaps unique in the world, deserves to be highlighted in this sphere, with a forestry technical follow up as a case study.

Various projects are still being carried out that reveal a strong bet on sustainable development and appreciation of endogenous resources, namely the ORNITOURISM - Conservation, Protection and Appreciation of Ornithological Heritage - that has resulted, amongst other aspects, in the implementation of a cross-border network of feeding points for scavenger birds, tourist accommodation and package tours associated with Birdwatching tourism. Also the CONTENDA NATURE Project- Integrated Plan for the Contenda Estate's Tourist Development, its objectives being the qualification of the territory as a differentiated tourist destination, the preservation of local authenticity and the promotion of tourist activities and tourism as a factor in social cohesion. Furthermore, the Contenda Hunting Management deserves a mention as it has recently allowed a set of improvement interventions in the National Hunting area, complementarily diversifying the offer in the area of Nature tourism.

Contenda is today the head office for 14 people, all local residents, 3 families permanently live on the Estate and it receives hundreds of visitors annually resulting from visits of students of educational establishments, those of scientific interest or of recreation and leisure. Within this landscape and resulting from the implementation of this policy, dozens of walks with local and regional participation have been organized. The Contenda Estate webpage and the Facebook page have 30,897 visualizations and 760 followers respectively.

This landscape is still fertile ground for the development of partnerships with universities, to deepen research in various areas such as landscape, forest, biodiversity, hunting and climate change. Within this context, the Contenda Estate has a variety of academic work developed there (degrees, masters and PhDs).

This landscape is the result of a process of social construction, deconstruction and reconstruction, a living narrative of happenings and disputes throughout more than six centuries between two peoples with marks, remains and a history that have left an inheritance of great landscape and cultural importance and whose results have been expressed within a territory that today represents an enormous public asset for society.

Over many years and in an active way, many were those who intervened (inhabitants, owners, tenants, public services) and, via agricultural and social policies, decided and

promoted the occupation of this land and its use, now ordered and managed by the implementation of a landscape policy.

Figures/Photos: AFN - Autoridade Florestal Nacional - 1; Pinto Moreira - 2, 12, 13, 28; Daniel Pinheiro - 3, 9, 26, 30; Pedro Rocha - 4, 14, 15, 19, 20, 21, 22, 24, 32; unknown, courtesy Mário Almeira - 5; unknown, courtesy Mário Martins; Direção Regional de Florestas do Alentejo (archive) - 7, 8; Nuno Lecoq - 11, 17; Luís Pinheiro - 18, 29, 31; António Cunha - 23; FTSS - 27.