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Perfect resources, tourism and territorial singularities: contributions to the development of a scientific tourism line in Golegã

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PERFECT RESOURCES, TOURISM AND TERRITORIAL SINGULARITIES: CONTRIBUTIONS TO THE DEVELOPMENT OF A SCIENTIFIC TOURISM LINE IN GOLEGÃ

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Abstract

This article aims to discuss the fundamentals that can support the development of a scientific tourism line in Golegã and have two main objectives: integrating the concept of scientific tourism into a broader theoretical-conceptual framework and presented a methodological contribution to operationalize the potential of a scientific tourism experience through value institutionalization mechanisms. Starting from a theoretical-conceptual framework that relates territory, competitiveness and territorial cohesion, tourism and public policy, the article presents four new concepts: perfect resources, territorial coherence, economic and territorial singularities. Scientific tourism is still a little explored tourism line, both in Portugal and internationally. However, now there are very favourable conditions to discuss this issue, particularly in political-institutional terms. In this case study, the hypothesis of a scientific tourism line is based on the articulation of a set of resources with the necessary construction of an associated territorial coherence process.

Key Words: Competitiveness and territorial cohesion, scientific tourism, perfect resources, territorial singularities, Golegã.

1. Introduction

Scientific tourism is still a little explored tourism line, both in Portugal and internationally. However, now there are in Portugal very favourable conditions to discuss this thematic. First, due to the nature of the concerned resources and its social and economic meaning and correspondent relations with public policy. Second, because nowadays there exists an extended and coherent set of political-institutional conditions in this domain that favours objectively scientific tourism: The program *Cultura e Ciência* (C^2) (= Culture and Science) developed by the Portuguese Secretary of State for Higher Education in articulation with other public administration organisms; the recognition of the tourism importance to the regional economic dynamism of the regions (2027 Tourism Strategy) and scientific tourism, particularly the Recommendations of the Republic Assembly (RRA) No. 197/2017; the coherence of this proposal with the strategic documents of the region and the county of Golegã (Lezíria do Tejo 2014-2020 Strategic Plan and Strategic Plan of Urban Development PEDU 2014-2020"); and,

no less important, the developed approach in this article articulates with the fundamentals of the smart specialization strategy – RIS3 (related variety, multiplier effects, place-based approach and practice based research).

Despite the political-institutional framework that favours the development of this type of projects, it is believed that the effectiveness in its design and implementation might be increased if there is a theoretical-conceptual coherence that allows a proper framework for relations between territory, competitiveness and territorial cohesion, tourism and public policy. This conviction stems from the fact that this framework seeks to clarify the spaces, the players and the mechanisms through which this strategy might be properly promoted.

Therefore, this text has two fundamental objectives. The first one is integrating scientific tourism in a coherent theoretical-conceptual framework that allows a collective, evolutionary and territorial dynamics to be brought to the processes leading to competitiveness and cohesion increase. The second objective is to particularize a scientific tourism line in Golegã as an empirical illustration of the first objective, giving the experience coherent and executable lines of intervention. In addition to this introduction, the article is structured in four sections: the first one articulates the relationship between territory and regional development, and the concepts of perfect resources, territorial coherence, economic and territorial singularities, are presented as a way of theoretically relating the territorial nature of public policy and competitiveness and cohesion processes, where tourism is likely to be a case of this dynamic. In the second section some international experiences are described, with emphasis on the case of Chile and the Aysén Region, and some Portuguese experiences are also summarized. The third section is devoted to the development of the case study of Golegã. It ends with results and some clues and reflections for the future.

2. The concept of tourism as a territorial singularity

2.1. Territory and Regional Development

The approach developed in this section is inspired, as a starting point, on approaches to territorial competitiveness and endogenous development, more specifically on regional development theories that consider space as a relational asset (see, among others, Capello, 2007). The concept of territory adopted here is affiliated within the scope of the territory economy and supports conceptually in the perspective that the territory is a subject of power in the processes of regional development (Alves, 2001; Lopes, 1995). In this perspective, the

territory is the overlapping of multiple space dimensions: a physical space (geographical scale), an interactions space (players, networks and interaction dynamics) and a political-institutional space (resulting from coordination between different organs of power and the integration in a specific space of its different policies). It implies, from the outset, that whenever the term "territorial" is used, one must take into account the dynamics related to the evolution of integration in a given territory of these three dimensions and the related tensions, that is to say that the territory is a result of complex interdependencies between the size of the market, the dynamics of interactions and a more or less favorable political-institutional framework for economic and social achievements (Camagni, 2008).

In more specific terms and looking for space for future actions to implement concepts and strategies, the relationship between territory and regional development might be conceptualized as a systemic process (among multiple players, their objectives/activities and their dynamics), interactive (due to multiple associated interdependencies) and cumulative (path dependent), that is, a complex process with high structural uncertainty (please, see Table 1). This process involves several tensions, for example between efficiency and equity, between expectations and outcomes or between desires and possibilities. Therefore, the management of the associated tensions and dilemmas strongly affects the process of regional development. Although it is not easy to quantify and qualify regional development in an unquestioned metric, it is relatively easier to assess some of its main manifestations and its more uncontroversial results. In these terms, this is a process that seeks to simultaneously maximize (in time and spaces) an unstable balance between economic growth (production, employment, exports, investments) and sustainability (resources, families, behaviours, mobility), that is, a process that seeks to manage a difficult tension to perform between efficiency and equity.

Table 1 - Territory and Regional Development

<table>
<tr><td colspan="6"></td><td colspan="3">Territory (concept)</td></tr>
<tr><td rowspan="9">Regional Development</td><td colspan="2">Objective nature: results</td><td></td><td rowspan="9">Competitiveness and Territorial Cohesion</td><td colspan="2">Processual nature</td><td>Physical Space</td><td>Interactions Space</td><td>Politico-institutional Space</td></tr>
<tr><td rowspan="4">Growth</td><td>Employment</td><td rowspan="4">Efficiency</td><td rowspan="4">Competitiveness</td><td>Attractiveness</td><td colspan="3" rowspan="8">Regional Development = the result of these dynamics that involve multiple tensions and dilemmas between resources (human, physical, technological) and processes (organs of power, nature of agents, objectives and strategies, governance models)</td></tr>
<tr><td>Production</td><td rowspan="3">Connectivity</td></tr>
<tr><td>Exports</td></tr>
<tr><td>Investment</td></tr>
<tr><td rowspan="4">Sustainability</td><td>Resources</td><td rowspan="4">Equity</td><td rowspan="4">Cohesion</td><td>Proximity</td></tr>
<tr><td>Families</td><td rowspan="3">Access</td></tr>
<tr><td>Behaviours</td></tr>
<tr><td>Mobility</td></tr>
</table>

Source: Own elaboration.

The approach that has been developed stresses out more strongly the nature – what is – of the regional development. Changing slightly the approach angle, to become closer – as much as possible – to the processes and dynamics through which it is possible to condition the regional development process. In this sense, it will not be too subjective to argue that the objectives of any territory in a globalized and interdependent world are inevitably and increasingly associated with its dynamics of competitiveness and territorial cohesion (C&TC) (Camagni, 2002; Lopes, 2001; Mateus *et al*., 2005).

Competitiveness should be understood as a self-reinforcing binomial of attractiveness (of resources, in its multiple manifestations) and connectivity (through the construction of networks and diverse interactions) and cohesion as a territorial integration of concepts of proximity (in their various typologies) and access (material, institutional and financial). Attractiveness without connectivity leads the territories to situations of economic, social and political lock-in; while proximity without access leads territories to serious social and institutional imbalances: communities are geographically close to goods, equipment and/or services, but for many reasons (material, physical, cognitive) they cannot access them (in the concrete sense of use and consumption). On the other hand, connectivity without attractiveness, and access without proximity, make us only virtual consumers without participation on the *territorial production function* and its impacts, namely in terms of knowledge dynamics and innovation and the use of the various learning curves inherent in their activities and processes.

The coevolution of efficiency and equity leading to irreversible increases in C&TC therefore requires the full and enlightened involvement of the various regional and national players and, in some circumstances, even of supranational players. On the other hand, knowledge and its management have gained importance as an essential resource in the production and distribution of wealth in different territories (Lorenz and Lundvall, 2006, Lundvall and Johnson 1994, OECD 1996), as well as in the conception of public policy (an essential mechanism in the pursuit of economic and social objectives emanating directly from the territory and its agents) (EU, 2010, Ferrão, 2011). Logically, it follows from these considerations that projects that intend to contribute to increase C&TC must support their organization in learning, knowledge and innovation dynamics (Cappellin and Wink, 2009; Lundvall, 2006).

The essential question, in terms of research and conceptualization of the intervention space (public and business policy) in this dynamic of development, is the ability to cross this process (from its nature to the nature of its processes) with the explicated territory conception, by

defining models and mechanisms capable of managing the tensions and dilemmas inherent to the complexity of a regional development process, or more specifically, of enhancing competitiveness and territorial cohesion to higher levels. Thus, each territorial experience is an attempt of territorial appropriation relative to the control of some of the most relevant dimensions of the development process, through the effective management of the tensions inherent to the regional development.

2.2. Perfect Resources, Singularities and Tourism

The intervention object in the C&TC process are the resources and processes associated with it and, necessarily, its relationship form. One of the main arguments to present and explore argues that the nature of the resources and the coherence of the processes condition the C&TC strategy, since the territorial dimension that may arise from their articulation reinforces the different gains typology of C&TC. Regarding the resources, it is important to assess the extent to which they exist, where they are, whether it is possible to mobilize them for our purposes and clearly define their nature. In this context, resources do not have all the same potential to achieve the objectives in question. Therefore, some resources are more appropriate than others they are more or less perfect, in the sense to introduce in this approach. Our proposal is to classify a resource in terms of its degree of perfection (Nunes and Sousa, 2017). So, it is suggested that a *perfect resource* has seven characteristics:

1. Globally scarcity
2. Locally abundancy
3. Local control of the resource
4. Territorial embededdness (difficult imitation and relocation, identity aspects)
5. Multiplier effects (direct, indirect and induced)
6. Use requires preservation (sustainability)
7. Global demand (viability)

The concept of perfect resource is central to this approach. Therefore, it is important to leave some notes on this concept. *Perfect resources* do not have a binary nature, neither static nor absolute in time and space and in the same way that they can be perfected, they can also lose perfection. *Perfect resources* are a possibility among several, which results from a political,

economic and social construction. Another important aspect stems from the possibility that, at a point in time, local agents have the control mechanisms of a perfect resource. However, this does not tell anything about the nationality and rationality of such control, that is, the existence of the resource may not guarantee its exclusivity. Perfect resources that are not used by the local community end up being exploited by agents outside the community, with loss of control of the dynamics of economic value appropriation and, usually, not safeguarding the conditions of the resources preservation and sustainability. In addition, it should be noted that from *a certain degree of perfection* the resources begin to attract the attention of the various (national and international) economic agents and the international mobility degree will quickly translate into a competitive game for competence. On the other hand, the global demand, and its correspondent market value, determines the economic (minimum and maximum) threshold of a perfect resource. Finally, the preservation of a perfect resource does not necessarily depend on the dynamics of demand (market). The dynamics of economic viability and preservation are self-reinforcing, although widely independent, both in the strategies and mechanisms that support them and in the agents that embody them.

Regarding processes and their effectiveness, it is argued that the effectiveness of the intervention process over a perfect resource will be greater the greater its *territorial* coherence is. The *territorial* (geographical, economic and institutional) coherence of the process that intends to intervene in the scope of a (more or less perfect) resource results from the *territorial* articulation and integration of three components that allow to give operability to the concept:

i. Governance of these territories (coordination of processes, strategies and rationalities underlying political-institutional capital);

ii. The different knowledge bases and corresponding learning modes;

iii. The regional economic and social structure.

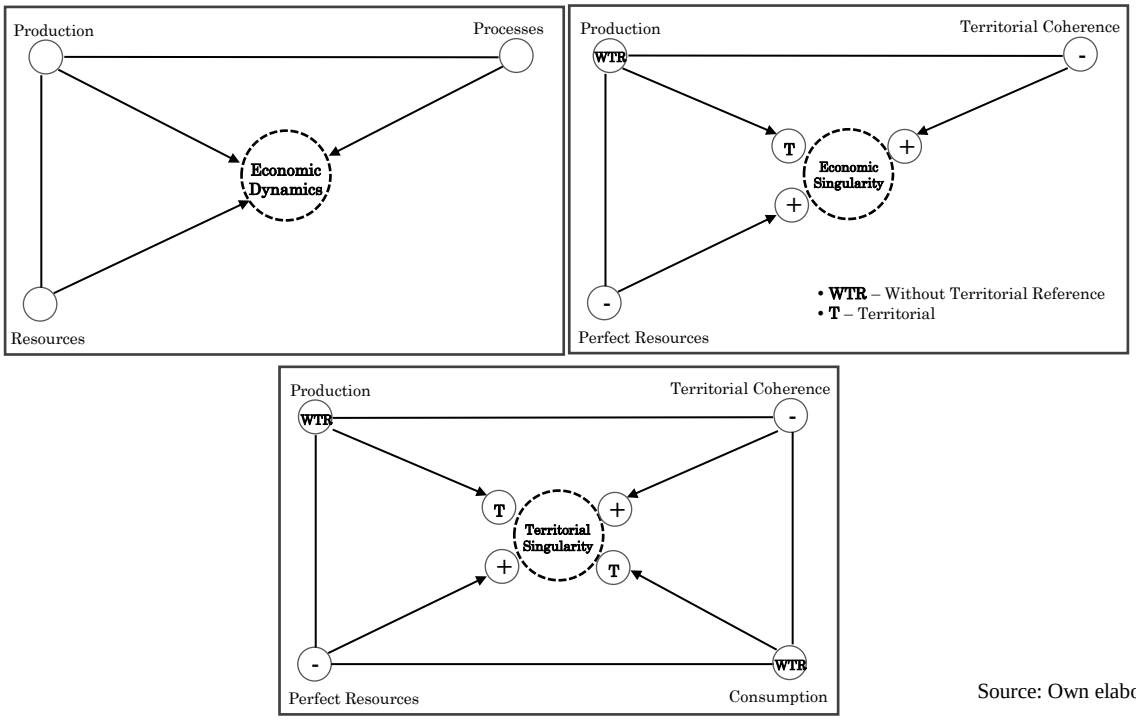
In short, these three dimensions should emerge a minimal critical mass of players, strategies and means that give *territorial* coherence to the transformation process of a resource with potential in an economic and social realization. This is not, of course, a generic coherence; each territory builds its *territorial* coherence according to its objectives and the resources inherent in its pursuit, supported by a favorable social, institutional and political framework. The construction of the territorial coherence contributes to the qualification of the perfection degree of a resource and the public policy emerges as a necessary condition for the process.

Now it is possible to present a new concept: economic singularity[1] (Figure 1). In these terms, an economic singularity emerges when it is possible to identify a perfect resource and give it territorial coherence. In turn, under some circumstances, the economic singularity may have a structurally differentiating economic characteristic: production and consumption are mediated by territorial proximity, that is, they are concretized (determined) at the same point in space. In this case, there is a territorial singularity[2]. From the conceptual point of view, it follows logically from the above discussion that the potential of both singularities to achieve high levels of C&TC is maximum. Maximum in the sense that the balance between competitiveness and cohesion achieved in the meantime is associated with high levels of territorial irreversibility, regarding the restructuring potential of this balance. In other words, the C&TC obtained through singularities is more – economically and socially – sustainable than that obtained through exogenous processes of economic dynamization.

Figure 1, analyzed clockwise, helps to illustrate these concepts. The economic dynamic results from the ability to combine resources and processes to produce goods and services efficiently. However, introducing a differentiation between T – territorial and WTR – without territorial reference, in each of the considered dimensions, qualifying them according to the conceptual framework developed so far, a quite different result is obtained: as resources gain perfection, processes become territorially coherent and production is rooted in territory, the economic dynamic is shaped as an economic singularity[3]. Then if the dimension associated with consumption is introduced (with identical differentiation), potentially, a territorial singularity emerges which also has potentially a high probability of contributing to C&TC's qualifying and to less irreversible gains.

[1] The singularity - stolen from physics - is here used, in metaphorical terms, as a way of representing a point of high density, a high concentration of mass - resources and processes - in a territory.
[2] A territorial singularity is a case of an economic singularity.
[3] For example, an industrial cluster can set up an economic singularity.

Figure 1 – Singularities conceptualization



Source: Own elaboration.

In the approach that has been developed so far, tourism is considered a sector of the economy (Song *et al*., 2012). However, as any sector of the economy and its related activities, it has specificities that objectively condition interventions in its domain, either public policy, business policy or innovation modes (Hjalager, 2010; Nordin and Hjalager, 2017). What is the main specificity of tourism as an economic activity? This question may have multiple answers, although in our perspective the central element is that tourism is produced and consumed in a specific territory. Unlike the generality of economic goods and services, where consumption and production may be – and usually are – functionally separated, or in different territories, tourism does not have this characteristic structurally; on the contrary, tourism – and its added value, particularly in terms of its multiplier effects – is determined, quantified and qualified on a territorial basis. This specificity, rarely explained, has profound consequences, both theoretically and empirically. Regarding our objectives, the main consequence is that tourism may shape a territorial singularity, that is, it may configure a manifestation of economic ubiquity (production and consumption) in the same territory, from a coherent, shared and desired integration of *perfect resources* with *territorial coherence*.

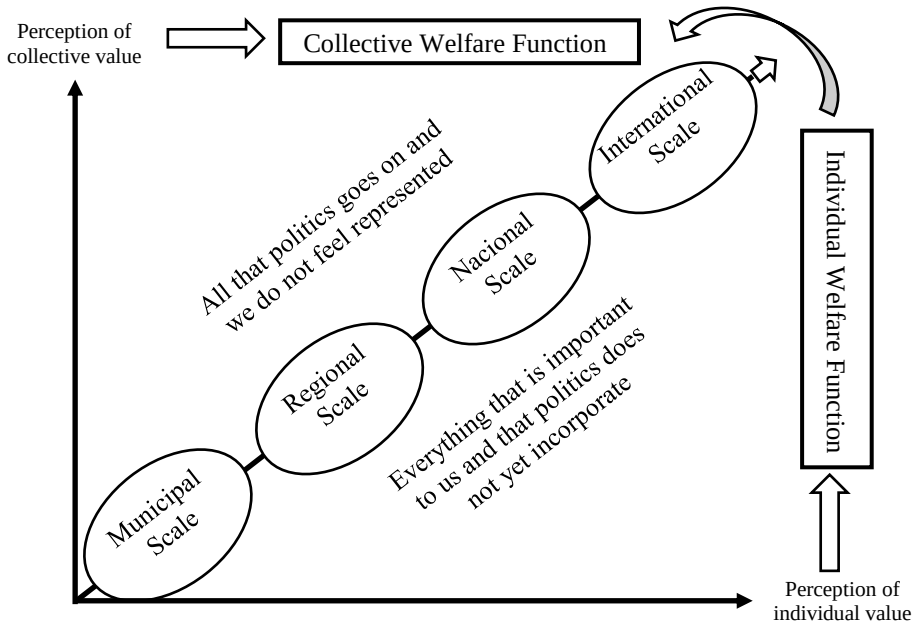
From this perspective, on one hand, if we try to boost the C&TC process through tourism, this intervention will be more effective as we approach the concept of territorial singularity and the realization of this potential is a challenge for researchers, politicians, entrepreneurs and community in general; on the other hand, tourism has an unequivocal territorial dimension. The

contribution of tourism to C&TC's gains is, considering the presented reasons, the result of conceptually shared and jointly implemented strategies. This means that the contribution of tourism to C&TC is not only – or above all – the result of innovative and competitive tourism firms. It is the result of this competitiveness integrated into an economic framework with territorial coherence and, as far as possible, built from territorially improved resources.

2.3. Tourism, the institutionalization of value and public policy

In the previous section it was stated that the construction of territorial coherence contributes strongly to the qualification of the perfection degree of a resource and, regarding this scope, public policy emerges as a necessary condition for the process. The main argument is that there will be no dimension of tourism competitiveness that does not depend directly or indirectly on public policy (Kennell and Chaperon, 2018; Bellini *et al*., 2017), understood as an essential mechanism for the pursuit of economic and social objectives that emanate from a territory. However, not always what has value for each of us, or even collectively for some of us, is the object of public policy actions. The evolution of the perception of individual value to the realization of collective value object of public policy is not an easy task and it is achieved through mechanisms of value institutionalization. We are often led to recognize that there are resources with high potential for economic and social achievements in the territories, but whose operationalization happens slowly. Such a difficulty is justified, in our view, by the insufficient institutionalization of these resources value in society, namely by establishing public policy options. Nunes (2010; 2011) developed a model of analysis and decision-making to relate the evolution of an individual welfare function to a collective well-being function through the institutionalization of value. Figure 2 helps to illustrate the main argument.

Figure 2 - Model of Analysis and Decision Making



Source: Nunes (2011).

Following Nunes (2010; 2011), the horizontal axis represents the perception of individual value, that is, the importance that we, as individuals, give to a given phenomenon. This importance increases as we move from left to right along this horizontal axis. In turn, this perception translates into an individual welfare function that integrates the hierarchy of our preferences (health, education, work, justice, leisure, social security, ...) weighted by the various restrictions that society places on us (budgetary, cultural, historical, legal, access to knowledge).

The vertical axis represents the perception of collective value. Different groups within society – following the explicit behavioral methodology for individuals – are organized following common interests and, for a given phenomenon, the value they recognize increases as they move up the vertical axis. A collective well-being function is then deduced, which also hierarchizes the desires of groups in society that are organized according to different types of rules and procedures. However, the way in which both types of functions are pursued is, as one might imagine, very different, regarding strategies and instruments.

Evolution is made from individual value to collective value and, finally, for a political representation of that value. Considering the diagonal of Figure 2, there is a coincidence between what value for us as individuals and the value that society collectively makes on the phenomenon in question. The minimum conditions are then met to collectively pursue the objectives we pursue as individuals. These solutions are preferably based on a more or less

formal policy options. It is easy to understand that the triangle below the diagonal represents all that we value and desire individually and which is not yet reflected in the collective interests of society. On the other hand, the triangle above the diagonal represents all that society pursues through a given policy, but in which the individual (still) does not feel represented. The conflicts between individuals and groups and even between different conceptions of society and the way to solve them are nothing more than the successive confrontations in different times and spaces of this dynamic of individual and collective learning. From this point of view, society is an amalgam of motivations in permanent contradiction and the nature of (current and soon) society is a result of the evolution of these dynamics.

Finally, on the main diagonal there are the different territorial scales (interdependent, with the corresponding organs of power) where balances and imbalances may occur between the different agents already identified. Policies do not all have the same scope, neither the players who follow them have all the same competencies, although they all have the same legitimacy to implement them. The (shared and territorially integrated) governance modes are the ones that strongly contribute for territories to reach more or less high levels of C&TC.

The institutionalization of value, that is, the transformation of an individual value into a collective value, framed by public policy, is the minimum condition for differentiated resources and strategies to be in a condition of equality regarding different policy options. The institutionalization of value is a mechanism to help creating an object for public policy and the efforts made in this direction must always count on the full involvement of the local communities (Nunes *et al*., 2018; Nunes & Sousa, 2018). These should be the first to identify and value their resources and to seek the best ways to preserve them and use against its objectives.

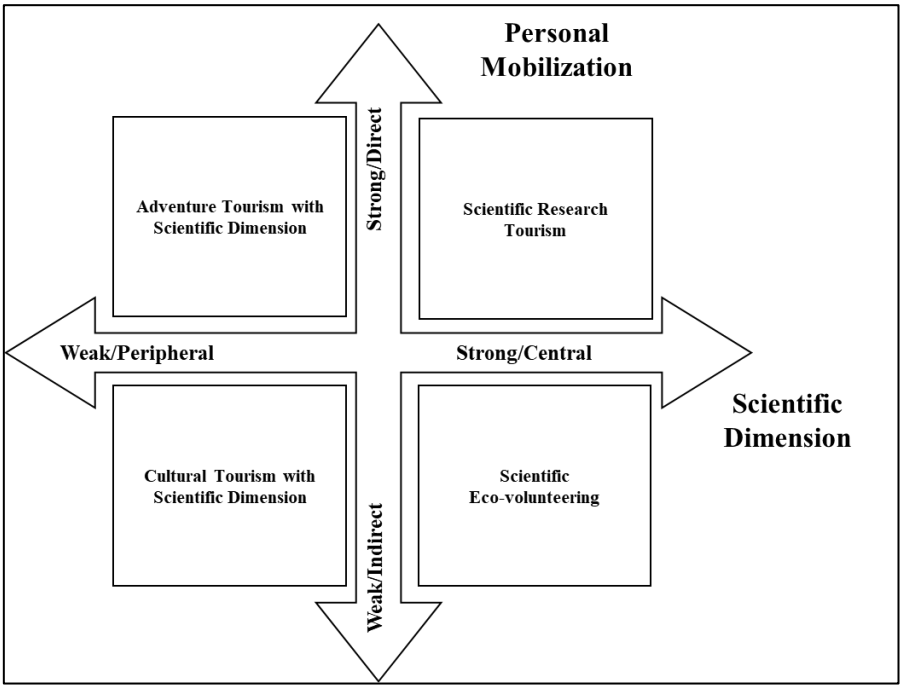
This is a key aspect of this approach. Note, many resources to which we recognize various potentialities are associated with emerging activities that need, first, to be preserved and safeguarded. But precisely because they are emerging, some (or even all) of their dimensions are not yet institutionalized, that is, they are not yet the subject of the instruments and public policy measures that would allow them to be safeguarded. The way to begin to solve this logical puzzle is by the institutionalization of the value (in the empirical part we will emphasize some mechanisms of institutionalization of the value). Additionally, this argumentation line is particularly valid in tourism in general, namely when understood as a territorial singularity, and in its emergent dimensions, where the need for materialization and institutional consolidation are more felt, as is the case of scientific tourism. It is not possible that potentially perfect

resources can progress to territorial singularities, without the territorial coherence that is conferred on it by the territorial policy that ultimately constitutes it and as a territorial synthesis of the collective value of the perfect resources. Scientific tourism is one of these emerging dimensions, which will be briefly analyzed below.

2.4. Scientific Tourism

Scientific tourism is based on the general principle that individuals travel with the aim of doing scientific research in its various manifestations. Scientific tourism is, according to Bourlon *et al*. (2011), an activity that generates knowledge and cultural mediation. Bourlon *et al*. (2011) conceptualize scientific tourism through the articulation of both the scientific dimension and the dimension associated with personal mobilization to develop the various activities. From this articulation, there are four possibilities (see, please, Figure 3): tourism for scientific research, scientific eco-volunteering, cultural tourism with a scientific dimension and adventure tourism with a scientific dimension. Different types of scientific tourism can be developed within these four groups, as described in Figure 4.

Figure 3 - Scientific Tourism and dimensions of analysis.

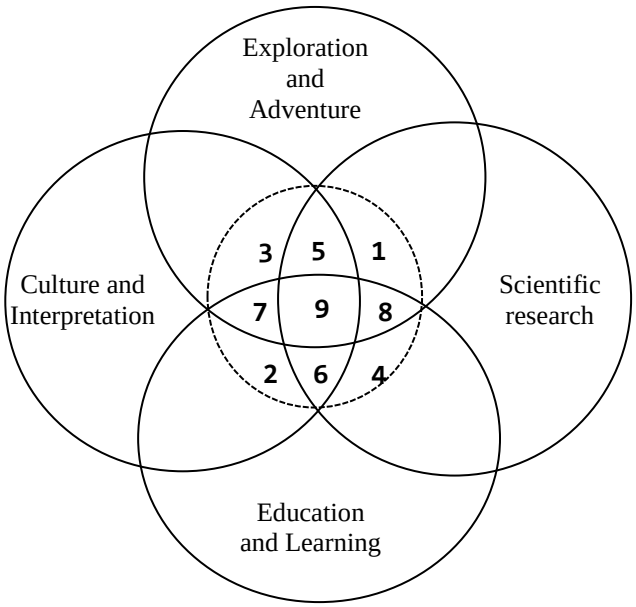


Source: Adapted from Bourlon *et al.* (2011).

As a result, scientific tourism has, as an economic activity, a cumulative and two-way nature, contributing to the sustainable growth of territories that are often fragile and lacking in assets and/or accessibilities sought by mass tourism through incremental processes of competitiveness

and territorial cohesion, instead based on singularity, knowledge, research and innovation. Cumulative nature, because it is based on evolutionary processes and has as its object unique resources of local territorial base, whose production and consumption take place in the same space, which, in turn, capitalizes, either through the investment in knowledge and innovation integrated in them, preserving them, or through the generation of new contents for research, valuing them.

Figure 4 - Scientific Tourism Types.



Types of Scientific Tourism

1. Scientific Explorations
2. Educational and Cultural Travel
3. Cultural Explorations
4. Scientific Eco-volunteering
5. Ecotourism with scientific dimension
6. Scientific and Educational Explorations
7. Sports explorations without scientific content
8. Educational and Learning Travel
9. Travel of Integral Scientific Tourism

Source: Adapted from Bourlon & Mao (2011).

Two-way nature, because in parallel, and adapting here the concepts of Ecology, also the consumer, as an integral part of the ecosystem formed by the tourist/resource binomial, enjoys the cooperative relations that are built (in which both "individuals" take advantage of the relationship, producing and absorbing positive externalities), insofar as it acquires the produced knowledge (scientific dimension) and satisfies its motivation (personal mobilization), also contributing with inputs for those purposes of preservation and valorization of the resource itself.

In addition, scientific tourism is not strange to the strategic role of tourism in local development (see, for example, Bernardino *et al*., 2018), by the involvement of different types of public and private partners (Eusébio *et al*., 2014), and, consequently, for the encouragement of other complementary economic activities (see, for example, Rebocho and Correia, 2017), and in this case, an interactive alliance is added between the profile of the logical motivation of valorization by the market for a unique and unrepeatable product and its ability to generate knowledge with fungible characteristics. In this way, scientific tourism promotes

knowledge-generating dynamics, preservation and enhancement of the *perfect resources* or cultural mediation, and at the same time induces the appropriation of their economic value shared by the local social players, due to the mobilization of agents and the territorial integration of the productive process that underlies it, conditions, in turn, favorable to the application of the conceptual model developed so far.

Summing up, this first part tried to emphasize the territorial dimension of the processes leading to the C&TC promotion. For this, a multidimensional definition of territory was considered allowing to qualify the resources and the coherence of the processes with attributes of this definition, leading us to the concept of territorial singularity, as a case of an economic singularity. Then, tourism in general was taken and one of its manifestations, as an intellectual space for reflection and consequent empirical intervention, relating its success to the existence and nature of public policy that conditions and enhances its evolution towards a territorial singularity. Finally, the approach outlined here does not support the fact that only territorial singularities have potential for C&TC accomplishments; what has been defended, however, is that this potential is higher if it is realized from territorial singularities, especially if the economic sector in analysis is tourism. At the same time, this approach is particularly relevant for territories with a low economic, social and political-institutional density, and in emerging intervention areas, whose recognition, consolidation and institutionalization require a high level of individual and collective mobilization, so that they can reach levels likely to become public policy objects, as is the case of scientific tourism field. The transformation of an individual value into a collective value framed by public policy is the minimum condition for resources and differentiated strategies to be on a par with policy options to pursue. The process of institutionalizing value thus contributes to the territorial coherence of resources, through its contribution to clarifying the object of public policy and, as a consequence, the different dimensions of public policy. Without public policy there are no territorial singularities.

3. Scientific tourism: some international and national experiences

Starting from the theoretical-conceptual framework presented, a brief description of some international case studies and national experiences that can be included in it will be made in this section, even though these practices are already consolidated and initiatives still in progress formation.

3.1. Scientific tourism in Chile: the Aysén Region

The Aysén Region, also known as Chilean Patagonian (Bourlon *et al*., 2011), is in the southern zone of Chile bordering the west with the Pacific Ocean and the East with Argentina. It represents almost 15% of the continental and insular surface of the country, being its third largest region with an area of more than 100 000 km2, which is administratively divided into 4 provinces (Aysén Provinces – capital Puerto Aysén, Coyhaique – capital Coyhaique, General Carrera – capital Chile Chico, and Capitán Prat – capital Cochrane) and ten communities (Pelle, 2016).

Scientific tourism emerges in the Aysén Region as a form of alternative tourism development, for socially, economically and environmentally fragile and disadvantaged territories through its isolation, with the absence of robust infrastructure networks that serve mass tourism but provided with specific and unique resources with potential for capitalization that promote the double need for development and equity (Bourlon *et al*., 2011). One of Aysén's innovative strategies for sustainable differentiation concerns a tourism development initiative on the Aysén coast, associated with the discovery of a territory with unique characteristics of natural and cultural heritage practically unexplored and yet to be discovered. This is an asset that can contribute both to the socioeconomic growth of local communities and to the conservation of fragile ecosystems of global importance, enhancing and increasing their knowledge through a joint motivation, together with the four modalities associated with scientific tourism mentioned in the second section.

Thus, having the Aysén coast as essence, the *Patagonian Archipelagos Project, International Destination for Scientific Tourism* was born based on the strategic alliance between the Center for Research in Ecosystems of Patagonia and the Multilateral Investment Fund of the Inter-American Development Bank, whose contents are housed through a digital platform created to share the tourist products and the generated knowledge about the theme.

This way, CIEP's Sustainable Tourism Department has collected information from the region in partnership with the operators of the scientific tourism network, identifying five thematic areas with opportunities for development, corresponding to five priority areas for scientific tourism in Aysén. Then, for each of these defined thematic areas, contents were developed, and tourism products were created associated to different resources and paths to be promoted in each of the priority areas. On the other hand, for each tourism product were also identified the thematic areas of knowledge associated with scientific tourism to practice in each place, enabling the tourist to know which course or routes exist for the area of knowledge of their interest. The above mentioned platform also provides a repository of documentation associated with the project, which includes field guides, regional maps and scientific and academic productions on the theme of scientific tourism, as well as dedicates a space to support obtaining certification of other projects and initiatives, aimed to develop the scientific tourism sector, at the level of firms and entities that are an integral part of the offer of tourist players network, of scientific projects incorporating tourists and/or students in their research process, or of tourist products or expeditions of scientific interpretation.

This is one of the most consolidated international experiences that allows to illustrate some of the dynamics and potentialities associated with scientific tourism.

3.2. Other international notes on scientific tourism

Although scientific tourism, as conceptualized in this article, is still a relatively recent research area, and the Aysén Region seems to be one of the most paradigmatic cases of its applicability, both to cover all its aspects and to achieve to do so in an isolated territory, there are other experiences that can fit, if not in several, at least in some of the identified typologies of scientific tourism.

In these terms, the case of Manaus City must be mentioned. It is the gateway to the Amazon forest and the capital of the State of Amazonas (in Brazil), whose process of colonization dates to the 19th century, and currently has a population of about 1.7 million inhabitants, covering an area of 11400 km^2 (Andrade, 2008). Despite being well positioned in the ranking of the largest and richest Brazilian cities, as well as having a high tourist attractiveness for its vast natural and cultural diversity, also associated with the rubber exploitation cycle and indigenous origins, public policies have not been able to counter their disorderly growth and deforestation, both in urban and rural areas, in the last decades, due to the urban development model, with high environmental impacts for the forest reserve area (Nogueira *et al.*, 2007), where the last

individuals of one of the most endangered primate species in Brazil still persist (Andrade, 2008).

In addition to the above-mentioned description, the case of the TAMAR (***ta****rtaruga* ***mar****inha* = sea turtle) project should be highlighted, as an alternative form of practice in the scientific tourism fields. It was created in 1980 by the Brazilian Institute for Forest Development, currently incorporated by the Brazilian Institute for the Environment and Renewable Natural Resources, in partnership with the Brazilian Foundation for Nature Conservation and jointly developed by the Pro-TAMAR Foundation (a non-profit private institution founded in 1988) and the Tamar/ICMBio Center (TAMAR, without date). In this sense, in order to reverse the process of extinction of 5 of the 8 existing species that reproduce in Brazil (Baptistote, 1994), for which the anthropic actions are among the main threats, 22 local bases of the Project were created, along the Brazilian coast and oceanic islands, in a total of 25 locations in the States of Bahia, Sergipe, Pernambuco, Rio Grande do Norte, Ceará, Espírito Santo, Rio de Janeiro, São Paulo and Santa Catarina (Vale *et al*., 2016) . In this context, technical teams, assisted by trainees, fishermen, tourists and local communities, carry out marking, monitoring and telemetry of individuals throughout their life cycle, and the release of turtle pups born from eggs previously transferred to incubation and safeguard centers (Baptistote, 1994).

After presenting the most emblematic international experiences, some of the national experiences are identified bellow.

3.3. Some national experiences in the scientific tourism field

The relevance that the national government attaches to tourism and its (national and international) promotion, namely scientific tourism, is well expressed in the public policies that are part of the current 2014-2020 strategic framework – a recent Resolution of the Republic Assembly No. 197/2017, of August 10, is a good example of this. However, based on the research carried out, the bibliographic collection on the subject is still small, which corresponds to the level of scarcity of information in the dissemination of initiatives developed or under way. Nonetheless, some national practices are presented in Table 2, whose requirements are gathered in the field of tourism with a dimension associated with different scientific areas.

Although the main objective is not to carry out an exhaustive survey of the experiences identified here, the case of Arouca Geopark may be considered as an example, for a brief characterization of the main differentiating factors of the model developed there, signaling the remaining cases as a suggestion for possible future investigation. In line with the philosophy

recognized by UNESCO, underlying the creation of the European Geoparks Network (2000), to allow an exchange of experience and a joint promotion of the concept – geographically delimited territory, with a sustainable development strategy based on geological heritage conservation (in association with the remaining elements of the natural and cultural heritage) aiming to improve the living conditions of its populations – and each member of the network (Brilha, 2009) was recognized by the European and Global Geoparks Network in April of 2009, the Arouca Geopark. This Geopark has its headquarters in the Geological Interpretative Center of Canelas, as a member of a network that currently has 120 Geoparks and 33 countries, where Portugal is represented with four Geoparks (Terras de Cavaleiros, Naturtejo, Arouca and Azores Geopark).

Table 2 – Some national experiences related to scientific tourism.

Some National Experiences	Object	Institutions
Mação	Integrated Territory Management	ITM; CMM
Cantanhede	Biotechnology	Biocant; Centro de Ciência Júnior
Arouca	Geosites	Geopark
Oliveira do Bairro	Nature, ecotourism, religious, industrial, adventure	CMOB+IPAM (capital Turismo Científico)
Azores	Geopark, radio telescope	Regional Government
Madeira	Diving, Wild Islands	Regional Government
Mine roadmap and geological interest zones	Digital platform	Mining Development Company and DGEM
Entroncamento	Railway Heritage	
Constância	Astronomy	Constância town hall
Golegã	Prehistory	Núcleo Museológico do Centro Português de Geo-História e Pré-História
Seia	Ecosystems, biology	Private Entity
Teses de Mestrado e Livros (alguns exemplos cujo foco principal é o turismo científico)		
Sara Canilho	Portas de Rodão	
Maria João Ferreira	Oporto University	
Marlene Marques	Astronomy (Coimbra)	
Rui Cardoso	Scientific Tourism in Portugal: a route - Vacations and Schools (*Ciência Viva*)	

Source: Own elaboration.

As specific resources associated to this territory some notes are identified such as the phenomenon of *parideiras* (=calved) stones, marine fossils of 480 million years or the Mizarela cascade (Oliveira, 2006). In addition to the geomorphological and geological richness of the region, there are also different types of landscape units with a high value fauna and flora diversity of the Portuguese heritage, with reference to rare and declining species in Europe, but

still occurring there, for example the fox, wolf, genet, otter and wild cat[4]. According to the existing archaeological remains, the history of occupation of the county of Arouca goes back to 500 B.C., and it is marked by the accumulation of a vast tangible and intangible heritage, associated with the anthropic and cultural evolution in the territory, with a heritage of people like the Romans, Germans and Muslims. It is thus, in a context marked by both the presence of a unique (environmental, geological, cultural, historical and scenic) heritage, and the confluence of motivations expressed in public policies and in the aggregation of players (Universities of Trás-os-Montes and Alto Douro/UTAD, Minho, Oporto, Aveiro, Lisbon and Madrid, Spain's Geomineiro Museum and Arouca Town Hall), which is signed by Arouca Geopark in 2011, the *Arouca Declaration*[5], which advocates geo-tourism as an activity that supports the territory identity. Finally, the coordinator of the multidisciplinary team of the Department of Geology of UTAD, identifies as a vision of the strategy of territorial development of the Arouca Geopark *to become a tourist excellence destination and a national and international reference space for learning and deepening scientific knowledge, combining geological heritage with culture, gastronomy and remaining natural heritage* (Sá, 2016: 57).

4. The hypothesis of scientific tourism in Golegã

The case study presented in this article concerns Golegã. It must be understood as a first approximation to the problematic that has been developing and a first interpellation to the several players in the territory (community, economic players and public policy).

4.1. Golegã in the proximity of the perfect storm

From the point of view of the political-institutional framework, the hypothesis of developing a scientific tourism line in Golegã finds very favorable conditions, which is not always easy to find at the same moment of time and space. First, and in supra-municipal terms, RAR No.197/2017 recommends to the Government *the promotion of scientific tourism ... and to implement an action plan to promote scientific tourism* based on nine measures. Measure No. 4 states that the government should *identify municipalities with potential to attract tourists in this field and their involvement in the national tourism strategy*. Also, under the authority of the central administration, an initiative carried out by the Secretary of State for Higher Education and the Ministry of Culture must be pointed out, called *Diálogos Cruzados* (C^2), that

[4] Available in http://www.cm-arouca.pt.
[5] Available in http://aroucageopark.pt.

intends to make a deeper articulation between Science and Culture. According to the Secretary of State for Higher Education, *Diálogos Cruzados is composed of several working sessions aimed to bring together and to foster dialogue and creativity among agents and cultural and scientific institutions and of higher education, involving local and central administration, firms and associations*.

Finally, the whole context of the *2027 Tourism Strategy* is particularly favorable to this tourism dimension, although there is no explicit reference to scientific tourism or any of its manifestations. In regional terms, the *Integrated Strategy for Territorial Development of the Tagus River Region 2014-2020* also presents a favorable and conceptually coherent framework with scientific tourism. From a local point of view, the scenario is similar. The *Urban Development Strategy and Action Plan for Urban Regeneration of Golegã for 2014-2020* presents three strategic objectives: to regenerate and to boost the center of Golegã village by attracting new residents, visitors and entrepreneurs; fostering cohesion and social inclusion and promoting sustainable urban mobility and improving the quality of the urban environment; none of them misaligned with the possibility of politically-institutionally framing scientific tourism as a promoter of these goals.

From this brief analysis it can be concluded that there are no contradictions that weaken the coherence between the conceptual dimension and the political-institutional dimension in the approach that has been developed. On the contrary, the political-institutional framework is particularly favorable to our approach. In metaphorical terms, Golegã finds itself in the proximity of a *perfect storm*.

4.2. The potential of the perfect resources of Golegã

Golegã has a set of resources that, according to our definition of *perfect resources*, can fit into this classification and, if it is possible to confer them territorial coherence, they can evolve into a territorial singularity. Let's analyze first of what resources we are talking about and its main characteristics. Table 3 attempts to summarize the main features under analysis.

Table 3 - Characteristics of resources – Golegã.

	Object	Physical and administrative geography	Settlement model	Acculturation
Golegã	Territory	Municipality with a total area of 84.32 km^2 (95% of rural soil) belonging to the region of Ribatejo, in the district of Santarém, and to the administrative regions NUT III Lezíria do Tejo and NUT II Alentejo, divided internally into three parishes (Golegã, Azinhaga and Pombalinho). It is a part of the alluvial plain of the Tagus River, with a flat and scattered landscape with swampy areas crossed by the Tagus and Almonda Rivers and bordered by xerophytic vegetation, where fertile pastures and agricultural resources abound.	It has a population density of 66.1 inhabit/km^2, with 5576 inhabitants, of which 64% are concentrated in Golegã village, polarizing nucleus of the Municipality and seat of county, where activities and equipment are centralized. The remaining population is distributed by 6 other places (with less than 2000 inhabitants), of which the core of the Azinhaga, mainly agricultural, stands out as a complementary pole, to the detriment of the other rural areas with less population.	It presents a prehistoric occupation of the initial Chalcolithic period, as well as vestiges of the Celtic or Roman epoch and the Middle Ages, passing through the Avieiros' settlements in Palafitic buildings left by the twentieth century fishing communities and by the historical dominance of the Ribatejo countryside and the economic dynamics attached to the horse.
	Object	**Framework**	**Characterization**	**Singularity**
Carlos Relvas's Studio House	Photography	Iconic property located in the centre of Golegã village, built by Carlos Augusto de Mascarenhas Relvas e Campos, and where he lived. Born in 1838 in the municipality of Golegã, Carlos Relvas was a wealthy gentleman, politician, farmer, horse-breeder and horseman, sportsman, inventor and passionate photographer, an activity that was dedicated from the 60's. The advance of the techniques and massification of the photographic activity, led to the installation of the first real studios with a commercial vocation, which were characterized by glazed ceilings or by lateral incorporating glass structures, due to the demanding lighting conditions using sunlight.	In a first phase, Carlos Relvas installed a ground floor atelier, with a glazed front, in front of the great building of the family residence, that would complement with a studio of two floors in the 70's (with dark rooms, laboratories, and reception with living room on the ground floor and studio on the 1st floor) and rectangular floor plan. Of eclectic revivalist architecture, essentially marked by the movement of Romanticism associated to the impulse of literature and of the press, the building gained a character of originality and monumentality from its design suggestive of a temple, to the roof of Eastern configuration, passing through the neo-Gothic lines, structures cast iron and glazed, Gothic lacework, mythological notes, Greco-Roman statues or Moorish motifs, allied to the scenic beautification of the garden.	Along with his contribution in the art of photography, he contributed to the advancement of the technique in terms of phototyping, stereoscopy and photographic focus, leaving behind a collection of 12000 negatives in glass, the object of a process of restoration and digitalization that took around 13 years to complete. The legacy of Carlos Relvas became a social centre of international reference, as a monument evocative of the photographic expression, of scenarios and personages, singular by the culture of artistic, technical and scientific connection. The peculiarity of resisting practically intact and with the original estate and furniture makes it part of the scarce cases of musealized studios that have been conserved at the world-wide level, having been object of publication as Property of Public Interest.
Boquilobo Paul	Nature	The Protected Area of Boquilobo Paul (BP), classified as Natural Reserve (NR) at the national level in 1980 (Law-Decree no. 198/80, of June 24), was the first declared Portuguese protected area and integrated by UNESCO, in 1981, in the World Network of Biosphere Reserves. Subsequently, in 1991, 1996 and 1999, it was also considered in international and community terms as Biotope CORINE, Wetland of International Importance under the Ramsar Convention and Special Protection Area of birdlife within NATURA NETWORK 2000. These classifications resulted from recognition of the relevance of their habitats and species. The RNPB currently has classified 5,896 ha, and it is almost all located in the municipality of Golegã, encompassing the parishes of Golegã, Azinhaga and Pombalinho, as well as a small part in the municipality of Torres Novas, parish of Riachos.	Alluvial plain cut by riparian galleries and dense woody cores of ash, willows, reeds and *bunhais* in the most flooded areas, which delimit floodplains surrounded by mountains and pastures. It is subdivided into three zones: - nuclear, full and partial protection, with a role of biodiversity conservation and scientific research; - for extensive use, with additional protecting buffer zones where forest production, pasture and agriculture are under flooded areas; and, - for specific intervention, transition between river terraces and alluvium of the wetland, where agriculture is practiced with sustainable practices and include urban agglomerations. In addition, there is a high degree of innovation, technology and knowledge, activities in the areas of bird ringing, ornithological observation, water quality monitoring, nature surveillance, measures to promote biodiversity in agricultural and forestry activities, environmental awareness, production of scientific assets and valorization of products and services associated with the Natural-PT brand.	It is the largest representative aquatic ecosystem of inland wetlands, habitats in marked decline. Ten natural habitats listed in the Habitats Directive are inventoried, of which five are freshwater (including a priority habitat of standing water), one of herbaceous formations, and three forests. without prejudice to a high biodiversity in terms of fauna in general, birds are their main value, some rare species in Portugal and Europe, housing the most important Portuguese heron species, spoonbill species and other migratory birds from Africa and northern Europe, that occur or nest in it. On the other hand, several species of fish also use paul for spawning, with Lusitanian endemisms (*ruivaco* and Portuguese-*boga*), or species of amphibians and reptiles, with emphasis on the species of tortoises that occur in Portugal, and small mammals.

	Object	Framework	Characterization	Singularity
Saramago's House	Culture	Azinhaga is the second largest parish in the county of Golegã, where José de Sousa Saramago was born in 1922. Son of peasants with few possessions who would have emigrated to Lisbon, when he was only two years old, Saramago nevertheless maintained bonds to his maternal grandparents, in the village where he was born, having also lived in Lisbon and in the island of Lanzarote. In April 2017 the Foundation of José Saramago (FJS), located in the *Casa dos Bicos* in Lisbon, inaugurated the extension located in the house where the author was born, in Azinhaga, and it is also represented in the library of his house in Lanzarote.	He has worked as a health and social security official, translator (with more than 70 books translated), editor, journalist, ministerial adviser, president of the Portuguese Authors' Society and writer. However, it was in literary writing that came to be consecrated as a world reference, thanks to his singular contribution in the field of poetry, novel and narrative, with influence in the areas of theatre, music and cinema. He was a controversial author who had interventionist writing in the name of human rights. In Saramago' s literary life three great cycles of production can be identified: 1947-1953; 1966-1979; and, 1980-2010, the latter being the period that marked the style of Saramagian fiction that continued until his death.	He was distinguished with numerous awards, honorary titles and prizes at the literary level, with relevance for the 39 appointments Doctor Honoris Causa in universities of 17 countries, for the Prize Luís de Camões in 1995 and, finally, the attribution of the Nobel Prize of Literature in 1998. The restoration and musealization project of Saramago' s in *Largo da Praça da Azinhaga* was started through a partnership established between the respective Parish Council, the FJS and the Golegã Town Hall. On the ground floor, there is a library that offers all the literary collection of the author in several languages, a bookstore, an auditorium for cultural activities and an Internet bar. On the first floor it is evoked the environment experienced by Saramago with his grandparents during the holidays up to his 15 years old, with the recreation of spaces and recovery of some objects.
Horse	Economy, cultural knowledge and identity	The historical evolution of the productive structure of the Golegã county, around agricultural activities and the livestock industry, with preponderance for the production and breeding of horses, gave rise to a strong rooting of the activities and traditions associated with the horse line as horse production / breeding, horse riding, sports competition and cultural ethnographic events. The title of Horse Capital, the birthplace of the "Veiga" lusitano horses (bullfighters par excellence), developed by the farmer and zootechnician Manuel Tavares da Veiga, constitutes a potential market for Horse users (with special emphasis on purebred race Lusitano), resulting from the concentration of a remarkable set of infrastructures, equipment, services of excellence, initiatives and events that gravitate around the various activities with associated economic value, such as food services, treatment, hygiene and veterinary assistance of animals , transportation, genetical enhancement and race clearance, manufacture of riding equipment and ornaments, equestrian tourism, hotel accommodation, catering, among others.	Several initiatives around the horse's line are energized, such as: - the annual event of *Expoégua*, during the month of May, which is dedicated to the show of mares and polders of all races integrating the *Romaria* of Saint Martin; - the "National Horse Fair" (since 1972, then the Saint Martin Fair, which dates back to 1571, and to which the "Lusitano Horse International Fair" was added), in the first half of November), in Largo do Arneiro; - Regular animation of Tradition Coupling Competitions (played by horses, cars and coaches from Quinta da Broa, in a total course of 14 kilometres, with proofs of overcoming and mastery); - inauguration of the multifunctional complex Equuspolis, located in Horta da Baralha, dedicated to the horse and the plastic arts; - infrastructure of equestrian circuits forming part of the tourist map of the county; - Pegaso project, between Portugal, Spain, England and Ireland, under the Interreg III B Initiative "Atlantic Area", reinforcing the horse as an identity with a tourist attraction; - Euro Equus project between Spain, Portugal, Belgium and the Czech Republic for the development of equestrian regions and preservation of the European cultural heritage.	The county of Golegã constitutes the largest "commercial warehouse" of the world-wide pure blood lusitano, where the creators present themselves selling their horses the whole world. Competitive capacities in the horse industry, both nationally and internationally, have attracted thousands of visitors, from countries such as Spain, Italy, France or the Nordic countries with equestrian traditions, starting to be part of international routes linked to equestrian tourism, and tourist offerings.

Source: Adapted from Nunes e Sousa (2017).

4.3. Analysis of the case of Golegã

The following table attempts to summarize the resources that have been characterized with an authors' classification regarding their perfection level, according to the criteria previously explained. To do so, the following methodology was considered.

Let *M* be a matrix with *C* columns and *L* lines, such as:

R – Resources, with $r = 1, \dots, C$

F – Factors, with $f = 1, \dots, L$

$x_{rf} - generic\ element\ of\ matrix\ M, classificatio\ of\ resource\ r\ by\ factor\ f$

Each factor is classified from 1 – irrelevant to 5 – very significate, the classification of each resource in relation to its perfection degree is obtained through the following expression:

$$For\ each\ r, X_r = \frac{\sum_{f=1}^{L} X_f}{\max \sum_{f=1}^{L} X_f}, with\ r = 1, \dots, C$$

This way $0.2 \leq X_r \leq 1$, the more X_r approaches the unit the greater the perfection degree of the resource. Just as an illustration, Table 4 shows the authors' classification of the resources in question.

Table 4 – Perfection degree of resources.

	Carlos Relvas's Studio House	**Boquilobo Paul**	**Saramago's house**	**Horse**
Globally scarcity	5	3	3	4
Locally abundancy	5	5	5	5
Local control of the resource	5	4	2	5
Territorial embeddedness	5	4	4	5
Multiplier effects	2	3	2	4
Use requires preservation	4	4	3	3
Global demand	3	3	2	4
$\sum_{f=1}^{L} X_f$	29	26	21	30
$\max \sum_{f=1}^{L} X_f$	35	35	35	35
$0,2 \leq X_r \leq 1$	**0,83**	**0,74**	**0,60**	**0,86**

Source: Made by the authors.

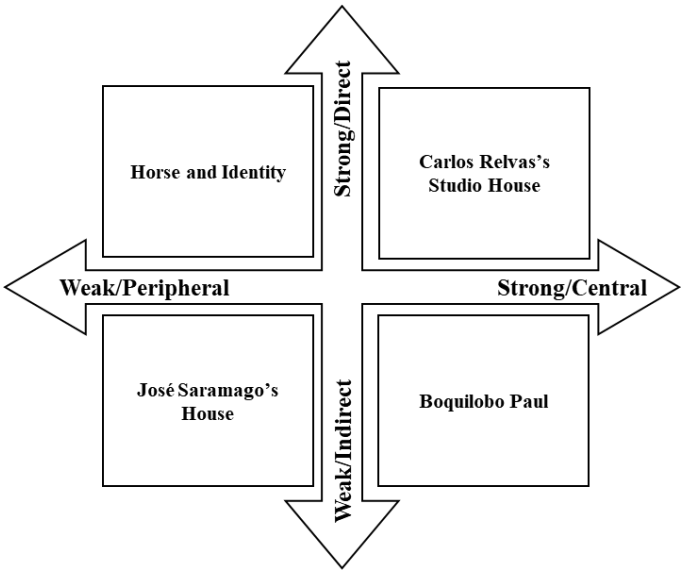
Despite the subjectivity of this methodology, it allows highlighting two important aspects. First, it allows to identify which dimensions are susceptible of perfection work in each of the resources. Second, it allows to identify indications that contribute to make choices

when the conditions are not met to begin the experience for the totality of the identified resources.

The cases identified in Table 4, by their own attributes that emerge from the characterization carried out, may be explored individually in a scientific tourism line. It may even be defended, with some advantages, that its object is quite different. However, a deeper analysis suggests that these *perfect resources* are effective if handled together. Why? There are essentially two sets of reasons.

First, Bourlon *et al*. (2011: 21) point out that there are complementarities and synergies between different forms of scientific tourism and that the advantages for the territory will be enhanced by the promotion and maintenance of the different forms and manifestations of this tourism type. Will it be possible to check the conceptual coherence proposed by Bourlon *et al*. (2011) to the resources under review? Let's look at Figure 5:

Figure 5 – Resources and Scientific Tourism Modes.



Source: Own elaboration

As can be seen from Figure 5, also the resources considered in the case study of Golegã have some degree of articulation between personal mobilization to develop (strong or weak) activities and the scientific (direct, central, indirect or peripheral) dimension, in accordance with the basic theoretical framework in view of the conceptualized different types of scientific tourism. This is the first reason.

But there is another reason even more relevant, given its implications in terms of realizing a potential of territorial value. The discussion in the second section is brought back here, summoning its results. Some work of public interpellation, without any statistical

significance, has led to some indications that the perception of value is not similar for all resources (Table 5).

Table 5 – Value perception and perfect resources in Golegã.

Resources/object	Value Perception			
	Individual	**Collective/Social**	**Politic**	**Preponderance**
Carlos Relvas's SH: Photos	+++	+	++	Individual
Boquilobo Paul: Nature	++	+	++++	Political
Golegã: Horse	++++	+++++	++	Collective/Social
Saramago's House: Culture	+	+	+	??

Subtitle: Low relevance (+) high relevance (+++++)

Source: Own elaboration.

The resource gains perfection and the process gain territorial coherence as the three dimensions of value are articulated: individual, collective and political-institutional, that is, as the collective value of resources is institutionalized. The consideration of the three dimensions forces the individual value, the collective value and the political representation of the collective value (embodied by public policy) to *sit at the same table* (even if, legitimately, with different goals). Without the territorial coherence that results from overcoming these dilemmas and managing these tensions, it will not be possible to build perfect resources and transform them into territorial singularities capable of invigorate C&TC with high levels of effectiveness. In other words, there are resources with high levels of perfection that can be explored in a scientific tourism line and if it is possible to give it territorial coherence one can be close to a territorial singularity.

Therefore, the proposed hypothesis in this article seems to have the potential to (come to) locate on the diagonal of Figure 2. Where? In a local or higher-level initiative? The answer to this question must be given by the community, although the discussion might be triggered by public policy and/or by the academy. It should never be forgotten that scientific institutions (where higher education institutions are inserted) are indispensable players of the multiple dynamics associated with scientific tourism.

In the light of what has just been defended, there are still some arguments that favour the creation and development of a scientific tourism line, not only in Golegã, but also in other national territories. In the first place, scientific tourism is part of a strategic dimension of the country and the region – Tourism – diversifying it, through the deepening of the dynamics inherent to intelligent specialization. If, for example, the objectives of the C^2

program are to be considered, a scientific tourism line allows not only to articulate science with culture in a coherent, explicit and direct way, but also territorially integrate behaviours and experiences associated with scientific culture, and even lead to the development of new products, helping to promote various objectives of RAR already mentioned.

Second, scientific tourism is transversal to other tourism types, but with potential positive effects on the territorial economic and social structure, through the application of research in these fields. Scientific tourism is both an objective and an instrument – an explosive feature of this project – as it is a research object, but it can and should also help to modify and strengthen the regional economic structure (research relations with existing local productive structure and/or to promote, creating new knowledge and integrating it in the territorial dynamics).

Finally, it is a tourism line that has not yet been explored, configuring an alternative (although transversal) hypothesis to mass tourism, which can contribute to consolidate a critical mass of demand that will help to make feasible and deepen the existing investment specialization levels (equipment, infrastructures, technologies) and that, in addition, it can be explored separately in Golegã or in regional articulation.

5. Conclusion

This text sought to give contributions in two distinct but interdependent domains: the theoretical-conceptual domain and the empirical domain. From the articulation of both, as a main result, it is possible to suggest the proposal of a methodological framework sufficiently operative that allows the clarification on the conditions that can construct and develop territorial dynamics of economic value, in this case focusing on scientific tourism. In theoretical-conceptual terms, the developed approach allowed to conclude that the territorial dynamics of development are constantly evolving processes and depend heavily on mechanisms that allow the construction of economic singularities and, in the case of tourism, territorial singularities. Competitiveness and territorial cohesion depend on the external dynamics that condition territories, but they also depend to a large extent on the capacity to build endogenous, differentiating and shared solutions by the whole community in the form of shared public policies and modes of governance. From the empirical point of view, it seems clear that the hypothesis regarding the development of

a scientific tourism line in Golegã has solid and concrete starting points to be developed in the short/medium term. There is a set of *perfect resources* that need to gain *territorial* coherence. Golegã – and certainly many other Portuguese regions that need to be identified – is in the proximity of a perfect storm. The combination of wills in the territory will determine, in a first level, the dynamics that our hypothesis may have soon. The next step is, of course, the need to give territorial coherence to the identified resources. The approach developed in this text is particularly useful for inland territories. The challenge is to identify potential perfect resources and from this dynamic turn them into territorial singularities.

Note

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