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**A MODEL OF TOURISM PLANNING AND DESIGN: THE EURO-REGION GALICIA-NORTHERN PORTUGAL AS A COMMON TOURISM DESTINATION**

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**Abstract:**

The new configuration of the Euro-region Galicia-Northern Portugal is in need of a debate on the problems regarding its development. Important questions arise, such as the organization and planning of common tourism destinations. In this paper important and valuable scientific literature on this topic and data from a study carried out by the authors for the Eixo Atlántico in 2001 are used to implement some instruments for their application to the Euro-region. The model presented here is a systemic elaboration of the design of the Euro-region as a common tourism destination in which a formal structure of its elements is provided, which will prove useful to managers and planners in their analysis of situations and in decision-making processes.

**Key words:** common destinations, cross-border regions, planning.

**Resumen:**

La nueva configuración del territorio de la eutorregión Galicia-Norte de Portugal precisa de un debate sobre los problemas de su desarrollo, entre los que se encuentra la organización y planificación de destinos turísticos comunes. Existe en la actualidad una importante y valiosa literatura científica sobre el tema que es usada en este artículo tratando de aportar una aplicación a la eutorregión, aprovechando los datos del estudio realizado por los autores por encargo del Eixo Atlántico en 2001. El modelo presentado es una elaboración sistemática del diseño de la eutorregión como destino turístico común y proporciona una formalización de sus elementos, que puede ser útil para las administraciones y los planificadores en sus análisis y toma de decisiones.

**Palabras clave:** destinos comunes, espacios fronterizos, planificación

## 1. INTRODUCTION

The tourism sector in Spain is undoubtedly of crucial importance from the economic point of view. This is clearly highlighted by the fact that in 2001 tourism was about 11% of the country's GNP (Figuerola 2002). In other words, tourism represented 10% of the country's employment. Tourism is, therefore, commonly referred to as Spain's most important industry (Anton and Monfort 2002). However, tourism is not evenly distributed all over the country's geography. The concentration is higher in several areas such as the Mediterranean coast or the Balearic and Canary Islands, where the supply is basically reliant on the combination of sun and beach. On the contrary, in the North, North-West and Center of Spain concentration is very low and the supply focuses mainly on historic resources and nature (Vera 2002).

Despite such remarkable differences, most of the scientific literature on tourism in Spain has focused on its economic benefits and the creation of employment (Bayón 1999). The analysis and characterization of destinations has been far less explored. Nonetheless, during the 1990s the administration saw the need to regulate and plan the use of the resources and thus contributions in those fields increased (Barrado, 2001).

In any case, the definition and planning of tourism destinations is of utter relevance for regional administrations. However, management usually originates from other approaches not always related to tourism, such as land use, management of natural resources or infrastructure development (Martínez 2000). Most of these approaches are primarily concerned with other issues, and are conducted independently of tourism planning initiatives (Dredge 1999).

This paper summarizes the most important conclusions and proposals stemming from a study carried out by the authors in 2001 and 2002 under the auspices of the Eixo Atlántico. This institution is a public body founded in 1991 by cities in Galicia and the

North of Portugal to improve the productive and social fabric of the Euroregion. The Eixo Atlántico also focuses on attracting investment to the region and thus coordinates municipal action and facilitates the process to access grants at European level. At present the Eixo Atlántico consists of 9 towns in Galicia (A Coruña, Ferrol, Lugo, Monforte de Lemos, Santiago de Compostela, Vilagarcía de Arousa, Pontevedra, Vigo and Ourense), and 9 towns in the North of Portugal (Viana do Castelo, Braga, Guimarães, Porto, Vilanova de Gaia, Peso da Régua, Vila Real, Bragança and Chaves).

The main objective of this study was to thoroughly understand tourism in the Euroregion as a whole and to present proposals for improvement. In other words, we were assigned to present a planning model. The team decided to analyze the whole region using the contributions of Souto (2001), Pardellas (2001) and Pérez Touriño (2000). Using all these different perspectives a hypothesis could be presented for a common tourism destination with a higher potential to attract demand than just the simple total of the capacities and resources of Galicia and the North of Portugal.

The fact that tourists tended to perceive this area as a common destination was highlighted by some studies on the border area of the river Miño, which divides Galicia and the North of Portugal. Over 90% of those staying in hotels in Galicia visited villages and towns in Portugal, and 70% the other way round (Pardellas 2001; Cadima 2002). However, the data is still not sufficient to claim that this behavior extends to those settlements 20 km North and South of the border (De Miguel 2000).

The methodological decision of the researchers also took into account the works of the Working Group Galicia-North of Portugal created in 1989 to coordinate the administrations on both sides of the border and to present a new configuration of the territory of the Euroregion. The Group is also in charge of building up a common administrative authority (Campesino 1996; Pardellas 2002), which could make good use

of the proposals here presented. On the other hand, this approach is fully in line with the recommendations of the European Commission (1999) regarding the need to base territorial development on economic integration and cooperation, and on the commitment of regional and local authorities.

From this perspective, the aim of land use planning should be to spatially interpret development problems. Therefore, the region cannot be conceived just as the physical basis for economic activities but as another endogenous resource (Fuá 1988; Garofoli 1992; Vázquez Barquero 1999). Several references can be found in the literature regarding the link between tourism to local planning, especially in rural areas (Ashworth and Dietvorst 1995; Fyall and Garrod 1998; Swarbrooke 1999; Roberts and Hall 2001). Special emphasis has been laid on sustainability and the need to integrate tourism into local production systems (Manning 1999; Ryan 1999). This eventually means that a relationship must be established between the territory and its resources, always taking into account any external positive factors.

Although the aim of this paper is not to delve deeper into the debate on endogenous development, this aspect should be mentioned due to several reasons. On the one hand, tourism resources are always endogenous and, on the other, it is difficult to find critical analyses on types of spatial strategies at higher levels of government, outside the regional development plans presented by European countries to the EFRED (European Fund for Regional and Economic Development) (Coffey and Polèse 1985; Aydalot 1986; Maillat 1998). In Spain, for example, this vacuum has given rise to serious problems when interpreting and applying development projects that have not taken the specific characteristics of tourism development into account (Valdés 1996). These complexities are even more marked when the region under study belongs to two countries, one of them with a marked regional administrative organization (Galicia), the

other under a single state administration (Portugal). Interesting methodological analyses of tourism planning have definitely been put forward (Getz 1988; Inskip 1991; Vera 1997), but the point that has been most widely criticized in all of them is precisely that of spatial fragmentation (Pearce 1995). Other criticism includes the excessive emphasis laid on some geographical concepts such as spatial interactions between components, nodal hierarchies or tour circuits, as these concepts have proven of little use in identifying a preferred pattern of land and resource use (Fagence 1995).

From this perspective, the objective of this paper is to analyze tourism destination design models, proposing a more precise conceptualization of the elements that are the chore of the region under study, and with the aim of contributing to the future common planning process of the region and to a more efficient use of its resources.

## **2. DESTINATION DESIGN MODELS**

Traditionally, planners have focused on residential, commercial and industrial land uses. These different interests have not always been properly combined, as proven by the latest regional development plans presented to the EFRED (Galician Regional Ministry for the Economy 1999; Portuguese Department for Regional Development 1998) . However, tourism involves a large number of economic sectors and different land uses. On the other hand, new social values linked to environmental conservation or sustainable development are influencing administrations and more especially planners (Busby and Curtin 1999; Swarbrooke cit). Methodologies, concepts, models and theoretical proposals have been largely influenced by those values when trying to address the problems of tourism destinations and provide the most adequate design solutions. In the territory under study there is an acute need for the elaboration of a practical model of spatial configuration to simplify the flows of tourists towards the

Euroregion and within it. At the same time, such a model must be accepted by the two administrations involved in the management of the two regions, so that their actions are coordinated and visitors perceive the area as a single tourism destination.

Tourism planning models and concepts are greatly varied in form. A brief analysis of most of them may help in defining the most appropriate model for the case under study.

Since the mid-1970s and with EFRED's support, literature on planning has increased significantly. A large number of studies and critical analyses now exist focusing both on resource use models and on planning instruments (Campbell and Fainstein 1996). In the literature, a distinction can be drawn between two types of tools. The first group consists of those tools concerned with the nature of the planning process, focusing on decision and policy-making, with relevant contributions by Getz (cit) and Inskeep (1988 and 1991), which are of relative importance to this paper but only as a methodological reference. On the other hand, studies proposing functional tools are more numerous, most of them of a descriptive nature. They are important to our study in that they attempt to explain the dynamic relationship between human behavior and settlement forms. Some examples of these models are the center-periphery model (Britton 1980), the analysis of travel behavior patterns (Lundgren 1982), or the multiple destination model (Lue, Crompton and Fesenmaier 1993), which proposes five travel patterns: single destination, base-camp, en-route, regional tour and trip chaining.

Another approach is the analysis of normative tools, which deal with the connection between human values and settlement forms. Gunn's studies (1972, 1993) are probably the most relevant to this paper. They deal with the concept of regional planning, identifying a destination region with five basic elements: definable regional boundaries, access from markets and internal circulation corridors, attraction

complexes, a non-attraction hinterland and entrances to the region. Furthermore, Pearce (cit.) synthesizes different works on planning and analysis from the perspective of the evolution of destinations, amongst which Gormson's spacio-temporal evolution model (1981 in Pearce, cit.) clearly stands out for its incorporation of the changes in the degree of local participation. Of special interest to this paper is the study by Opperman (1993) on the role of informal tourists in opening up a destination region to formal markets, and Leiper's model (1995), which identifies the characteristics and conditions that make a destination attractive.

Most of the above-mentioned analyses refer to specific cases. For instance, the models that address travel behavior patterns or multiple destination trips have been elaborated mainly using information from the United States. This means that their use for planning destination regions in the European context is fairly limited due to the fact that in this environment spatial factors and the vicinity of very similar destinations must be assessed to clearly identify a destination. From another viewpoint, the analysis of functional and evolutionary tools has been carried out using data from empirical studies. This was an attempt to explain the characteristics of a destination and aspects of its development, or the behavior of tourists. This information is of crucial relevance to planners during the pre-planning phase, but not so much when trying to identify preferences in terms of territorial objectives.

Despite these limitations, all these models present interesting ideas. Gunn's (cit) studies undoubtedly provide the most relevant insights to describe the physical structure of destination regions. His conclusions are widely cited and he has been one of the few researchers to focus on describing and developing models of destination structures. In his most detailed regional planning concept, Gunn (cit.) identifies the five afore mentioned key concepts; boundary, access and internal corridor, attraction complexes,

non-attraction hinterland and entrances. From another approach, and almost simultaneously, Lue, Crompton and Fesenmaier (cit.) identified five patterns of trips, with emphasis on the trip-chaining pattern, a trip that includes visiting a number of foci. More recent studies by Swarbrooke and Horner (cit.) and by Pizam and Mansfeld (2000) contrast the tourist behavior model in destinations where attraction nodes and structures for circulation routes exist or are likely to be established. In line with this analysis, Leiper (cit.) identifies three components of attraction systems: the nucleus, the tourist and the marker. The nucleus is the central element of the tourist attraction, the tourist is the traveler, the person who has personal contact with the places visited, and the marker is an item of information received by the tourist.

In this context, Dredge's study (1999) provides an interesting theoretical background. Dredge synthesizes and restructures earlier studies, especially the ideas of Gunn and Leiper, putting forward a proposal based upon three fundamental assumptions: that tourist generating markets are separate geographical entities, that the complex and multi-scale nature of destinations requires a flexible hierarchical structure, and that the planning and design model comprises a destination region, tourist generating markets, nodes, districts, circulation routes and gateways (1999: 781).

The study on the Euroregion provides enough data to elaborate a planning model for this region as a single tourism destination, using the ideas of Lue, Crompton and Fesenmaier (cit.) on multiple destination trips and Leiper's ideas on a destination's attraction elements. These elements can help the market predict tourist behavior and set up circular trips. These trips would lead tourists around the attractions of Galicia and the North of Portugal as complementary attraction nuclei. The model is based mainly on Dredge's proposal and can thus be specifically applied to a destination region dominated



by pleasure tourism and maybe not so much to other trips (business or visits to family or friends).

## **2.1. APPLYING THE MODEL TO THE EUROREGION**

Dredge's (cit) model has been chosen as a basis for our analysis of a planning model for the regions of Galicia and the North of Portugal. This model has been considered suitable due to its simplicity and high adaptability to the region under study. Firstly, the model does not present any regional limits or other territorial restrictions and is thus suitable for a border region such as the one under study. Furthermore, the model includes contributions on the behavioral patterns and the most frequent links in the destination regions where the use of cars is predominant, which is the case in this area.

Secondly, the model does not set any administrative land restrictions and is thus suitable for border regions such as ours, which has the following characteristics:

- It is an area in which pleasure tourism dominates. More than three-quarters of all tourists belong to this type (Pardellas et al 2003).
- The model systematically integrates the destination region with other holistic tourism models and does not exclude other analyses that might complete and improve this model. This is coherent with the basic tenet of systems theory: in each system a set of parts interrelate while the whole may belong to a larger system (McLoughlin 1969).
- The tourist generating markets and destination regions are separate geographical entities. Visitors come mainly from the center and other areas of the Iberian peninsula (Pardellas and Padín, cit.).
- The complex and multi-scale nature of the destination requires hierarchical but flexible structures adapted to suit different levels and characteristics of the markets. Galicia is included within the destination "España Verde" (Green

Spain) while the North of Portugal is included in the destination “Portugal” as a whole (Cadima cit.)

- The planning and design model includes a *destination region, tourist generating markets, nodes, districts, circulation routes and gateways*.

The physical borders between Spain and Portugal formally disappeared when they joined the European Union in 1985. However, the administrative borders and internal legislative differences remained. A Working Group for Galicia and the North of Portugal was set up in 1989. This has given rise to significant progress in the new configuration of a future Euro-region (the ultimate objective of the Working Group), but problems related to institutional adjustments and disagreements that affect all economic activities, especially tourism, continue to this day. This process should lead to the most logical and favorable conclusion possible, i.e., the formal constitution of the Euroregion in the shortest time possible. In this planning model coordination of business and administrative decisions is crucial.

Consequently, in our model the *destination region* is the Euroregion Galicia-North of Portugal. Natural resources are shared, including the Atlantic coast, the river Minho, the forest of Xurés (Galicia) –Gêres (Portugal). Besides, a common cultural heritage is present too due to the frequent wars since the 17th century and due to the economic exchange between the two peoples throughout time (Torres 1998; Pereiro and Silva 2000). Part of such heritage are of course the similarities of the two languages spoken in the two regions, Galician and Portuguese.

The main *tourist generating markets* for the Euroregion are the center and East of the Iberian peninsula, with a total share of 86% of all visitors. Markets from other European countries reach only 9% (Turgalicia 2002; Dir. Gêral de Turismo 2001; Richards 1998; Ruiz 1999). Hence, the educational background and behavior of tourists

is very homogeneous and their mobility in the destination tends to be unaware of the old border, which gives more credit to the hypothesis of high permeability in the area (De Miguel cit.; Pardellas and Padín cit.; Santos 1999). This assessment will be of special importance for the planning model, as its underlying hypothesis is that of a common destination.

Apart from the river Miño itself, there are two other main *nodes* in the Euroregion around the two most important historic towns, Santiago and Porto, both of them UNESCO cultural heritage sites. Thus, they also become the most important *nuclei* and include some of the most remarkable *attraction complexes*. In fact the image of the Euroregion abroad is very much linked to these two towns (Borrell 2001; Baselga 2003).

In the case of Santiago, this is due to the impact of publicity campaigns and promotion of religious-ethnographic events such as the *Xacobeo* (Holy Year for the Catholic Church, whenever the patron day of Saint James –*Santiago*–, July the 25th, falls on a Sunday) especially in 1993 and 1999. This event integrates aspects related to the Catholic creed with far more diffuse motivations affecting tourism in general and cultural and ethnographic tourism in particular. The concept of the “Santiago Routes” was thus promoted. In the case of Porto, its remarkable historic and ethnographic heritage make it rank second amongst Portuguese cities. Besides, its role in international trade, already highlighted by David Ricardo in the 18th century, is also remarkable. This is mainly due to its wine cellars and the exports of Port wine, along with its wonderful coastal environment, which altogether makes it an attractive town for tourism (Cunha 2001).

Despite all this and also despite the great tourism potential of both hierarchical nodes, several secondary nuclei must be highlighted. These secondary nuclei have

relevant attraction complexes presenting common features in both territories and thus making up our model of two complementary and highly homogeneous tourism spaces. It is those secondary nuclei that make up the two most important *circulation corridors* in the Euroregion. On the one hand, those nuclei on the coast are associated with sun and beach tourism but also with cultural and ethnographical content. Thus, the Rías Baixas in Galicia and the Costa Verde in Portugal become one single line, following the so-called Portuguese Route to Santiago. On the other hand, nuclei on the hinterland are again related to cultural and nature tourism. This other big area links the two-thousand-year old town of Lugo with those natural spaces of the mountains of Ancares and Gêres, finally leading to the ethnographic space of the route wine used to follow down the river Douro from Peso da Régua to Porto at the mouth of the Douro.

From this viewpoint, the Euroregion as a common destination has several *gates*. Their use depends on the tourist generating markets and the reasons behind the visits.

- For European tourist generating markets using air transport, the main gates are precisely the basic nuclei, Santiago and Porto, where the two international airports for both regions are located.
- For the markets of Portugal and the South of Spain traveling by road, the most important gate is the city of Porto through highway A-1 from Lisbon.
- For the European markets and those from the center of the peninsula traveling by road, the two main gates are the towns of Lugo and Ourense, through the highway of the Noroeste and the Rías Baixas respectively.
- Finally, while the above-mentioned “Santiago Routes” holds less importance with regards to the number of tourists using it, it nonetheless

holds a special quantitative value (as a projection of the Euroregion abroad), especially following two of its main routes, the so-called French Route from the East and the Portuguese route from the South.

Thus, entry into the Euroregion offers a wide range of possibilities for tourist generating markets not only depending on their geographical origin but also on the transportation means they may use and the reasons behind the visit. This may be interpreted as an attractive plus to the tourism destination and may make it more homogeneous.

## **2.2. COMPLEMENTARY ELEMENTS AND APPLICATION OF THE MODEL**

At this point, the basic design structure of the Euroregion as a common tourism destination has been outlined with the objective of providing planners and administrations with solutions. Going back to the most interesting ideas from the above-mentioned debate, the functional analysis of the two elements which shape the attraction complexes of the nodes must be completed. These two elements are: service elements and tourist products. Furthermore, how the destination region is projected in the tourism generating markets (what Leiper defines as "markers") must be analyzed too.

Due to the difficulty involved in homogenizing tourism statistics in Galicia and Portugal, the analysis of the *service elements* is limited to traditional accommodation establishments and to ecotourism establishments (EEs). The results would not be any more useful if other components reflecting different kinds of accommodation were introduced. On the contrary, those components might only hinder a proper interpretation of the situation.

The table shows that the structure of hotels is very different in each region. However, a common feature is that non-hotel accommodation beds are almost double

than those of hotels in Galicia and in the North of Portugal they make up 70% of the total offer. Aggregated data shows that hotels in coastal areas make up 76% of the total Portuguese hotels and 70% of Galician ones (Turgalicia 2002; ADETURN 1999). This seems to indicate that the offer of services is very much oriented towards tourism of sun and beach, which does not correspond to the weather characteristics of the Euroregion and, on the other hand, that the structure cannot be compared at all with the total European hotel offer, thus showing that the destination is far from mature.

The importance of ecotourism establishments (EEs) in the region is remarkable both from the point of view of quality and quantity, especially taking into account the importance of this type of demand in rural areas (Roberts y Hall 2001; Valdés 2002). In this case, the classification of establishments is totally homogenous throughout the region, as three almost identical categories exist in the regulations of both countries (Pardellas et al. cit.). From the architectural viewpoint, rustic houses (turismo rural) are the least interesting of all but they are also the most present type specially in Galicia, strictly offering no more than accommodation in a rural surrounding. Manors (turismo de habitação) are usually establishments that belong to the region's ethnographical and architectural heritage, the buildings are themselves unique, dating back to the 17<sup>th</sup> Century and earlier, constituting an attraction in themselves. There are many such establishments in the region. The third category is that of farmhouses (agro-turismo), which in theory offer guests the opportunity to take part in some of the farming activities, this being their main attraction (Pardellas et al 2003).

Unfortunately each and every one of the service elements already described cannot be mapped on figure 2, but still some general and elementary conclusions can be drawn for the sake of planners. Firstly, the great number of non-hotel accommodation beds defines the region as an immature destination, and services should therefore be

thoroughly reviewed. Several studies emphasize the relationship between high quality accommodation establishments in a destination and the ability of a region to attract tourists from different income groups (Rey 1998). Therefore, an increase in quality must be set as an important objective in medium-term planning proposals.

Secondly, and with respect to EEs, studies in Spain and Europe (Fuentes 2002; Roberts and Hall cit), also underline the importance of the creation of networks and interrelationships between EEs and other complementary products, so that the region becomes more attractive and tourism means more income to the local population. So far neither networks, nor relevant links with other types of accommodation offered exist in the region. Here is another important objective for planners.

These last two elements in the planning model for the Euroregion, namely tourist products and markers, are analyzed jointly in order to elaborate a formal proposal useful for defining objectives, a proposal that may enable the planner to choose the best alternatives as per the possibilities of the region. Some of the region's resources have been discussed above. Now there is a need to transform them into tourist products and promote them in the tourist generating markets. Tourist satisfaction is well known to depend on the correct elaboration of the products (Bull 1991; Pizan and Mansfeld cit.), but attracting tourists depends on the information at their disposal, that is, their awareness of the existence of the destination and what it offers. It is precisely in many cases choice at first sight, as it is that first image they will influence the tourist's choice and behavior (Crompton, J.L. and Ankomah, P.K. 1993). Adapting Leiper's proposal, the model distinguishes between *detached markers*, the information that reaches the tourist's place of residence, and *contiguous markers*, the information that the tourist receives once in the destination region.

The analysis focuses on two types of markers: detached markers especially meaning the information on web sites that may be accessed by all tourist generating markets, and contiguous markers meaning the brochures available to tourists in municipal tourist information offices in the destination region. This information was very useful to classify the use of resources, on the one hand to know whether they were "marked" (if the tourist generating market was aware of their existence) and secondly to understand the coherence between such information and that which the tourist receives once in the destination region. Four categories were chosen as a synthetic presentation of the different types of resources (WTO 1978; Gunn 1988; Vera cit.): *natural resources*, discriminating between water (living) and landscape (inert), *cultural and historical heritage* and *ethnographical heritage*, where a differentiation is made between material heritage, including traditional craft-work and work instruments, and immaterial heritage, which covers folklore, festivals, traditions, gastronomy, etc.

The aim of this analysis was to improve planning instruments. First, tourist attraction elements must be identified in the region. Second, information must be gathered on which resources are presently being used (making it possible to determine the resources not being used and therefore include them in a new design). Finally, the coherence of information received by tourists must be analyzed too.

As an application of the model to the data we have compiled, an analysis of the most important tourist products is presented (Souto cit.; Pardellas et al cit.), through a simple matrix without numerical values. In this matrix, blank cells mean that the resource is not being used, while colored cells represent those being used. Apart from that, the information that tourist may have is marked in blue lines if it is a separate marker and shady if it is a contiguous marker, or both if the information on the resource gets to tourist generating markets and is coherent with the information in the



municipalities. In a far more descriptive analysis, Pardellas (cit.) highlights that some relevant resources in the region (ethnographic and historic heritage) are not very much used, while natural resources rank first, especially those having to do with the landscape and water. The first instance means that the transformation of those resources into tourist attractions demands more effort from the private sector. This also indicates that ethnographic and historic heritage is highly influenced by the present lack of coordination between the Galician and Portuguese administrations, while natural resources are not so much affected by this, as they are attractions in themselves.

Synthesizing the contributions made by Leno (1993) and Ritchie (2003), and in line with the model proposed, the tourism value of the destination can be formally defined as a function in which relatively immobile internal factors (the existence of resources), external factors indicative of the activity (the use of the resources) and the way in which the destination is promoted in the tourist generating markets (markers) are considered. The generic equation is thus formulated as:

$$TV_i = \Sigma f(IF, EF), \text{ where}$$

$TV_i$  = Tourism value of the destination  $i$ .

$IF$  = Internal destination factors (resources)<sup>1</sup>

$EF$  = External factors (variables of the use of the resources the planner can use).

with the mathematical expression:

$$EF = \Sigma f(V_{ij}, \alpha m_{ij} + \beta n_{ij})$$

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<sup>1</sup> The mathematical expression of internal factors, which will not be developed, is:

$$IF = \Sigma J p_i u_i + \Sigma \max U(J p_i u_i)$$

$Phi$  = Primary hierarchy of the resource "i"

$\mu_i$  = Weighting factor related to the nature of the resource "i"

$\max U(Phi, u_i)$  = Maximal values of the function of the resource "i".

$V_{ij}$  = Tourism value of the resource  $i$  in location  $j$

$m_{ij}$  = variable that integrates the detached marker characteristics

$n_{ij}$  = variable that integrates the contiguous destination marker characteristics

$\alpha, \beta$  = weighting parameters

The planner can use this mathematical formulation as a starting point from to design the destination region. Later on, depending on the objectives set, the evolution of the variables can be estimated and the scenario can be foreseen for a given period of time. Hence, the final situation can be contrasted with the planned scenarios. The four elements of the reference function that may be analyzed are: the use or not of the resources and the type of marker used (detached or contiguous) to inform tourists. In the first case, zero values (blank space) correspond to potentially relevant resources in the destination design, but not presently used. If the resources are indeed used then a score from 1 to 10 may be used by the planner to express the hierarchy in the relationship between type of use-objectives. A similar outline can be used for markers. Scores can also be applied to them according to the objectives of the planner, in order to provide adequate information to the tourist generating markets as well as to tourists already in the destination region.

The model is undoubtedly open to other interpretations, but serves on the whole to identify the elements and resources with which to elaborate a correct destination design. At the same time, scores are assigned to such elements in the mathematical expression, enabling the planner to simulate scenarios in terms of objectives and contrast their behavior within a given period of time.

### **3. CONCLUSIONS**

The cross border regions of Galicia and the North of Portugal share a significant natural and cultural heritage, with enormous potential for tourism. Even more important than this potential is the high degree of complementarity they share, which may be highlighted in the coordinating process started by the institutional Working Group set up in 1989 to restructure the territory and design the space as a Euroregion.

The objective of this paper was to find an empirical application of a planning model based on a synthesis of the most important contributions in the literature, especially those by Dredge ( 1992, 1999). The model was then to be tested on a non homogeneous context in the two regions belonging to different countries.

The analysis of existing resources and the characterization thereof in order to elaborate tourist products in the most important towns in the Euroregion, as well as the study of tourist behavior in border areas, lay the foundations for a design of a common destination. This design should focus on territorial use from the most appropriate perspective, namely, the coordination of administrative action. Furthermore, the application of the matrix to current data shows that private investment must be fostered to increase the use of some of the most relevant resources. On the contrary, natural resources can be presented through simple institutional information. This seems to clearly mirror an immature destination and justifies the need for more design and planning.

Research reveals the interrelationship of the resources in the region overall, as well as important characteristics of tourism patterns and the structure of internal circulation corridors and trips. It presents a destination place design intended as a network of attractions, where the tourist would achieve maximum satisfaction

completing all the paths proposed. As an additional contribution, a formal model for constructing scenarios is offered, using the alternative uses of the resources and markers as variables. This may become a tool for administrations and the private sector to gain knowledge and make choices. In any case, the model makes it possible to check the initial hypotheses against the objectives achieved. In this sense, it is intended to provide planners with an instrument to diagnose and make decisions. In other words, both the Portuguese and Galician administrations are urgently encouraged to reflect on the future of tourism in the Euro-region not just in economic terms but in terms of land use reform. Under present circumstances, this scenario may seem overly utopian, but it is the role of scientific research to pose questions to institutions, especially when problems are properly analyzed and viable solutions are proposed. The social, economic and territorial vertebration of Euroregions is an important challenge that the scientific community cannot avoid.

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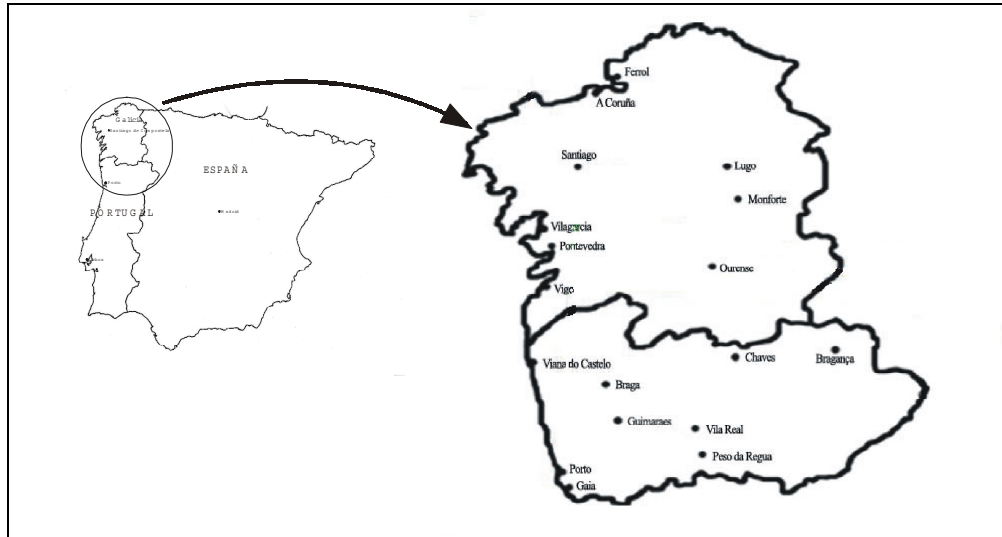
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FIGURE 1



Source: Author's elaboration

FIGURE 2. THE MODEL APPLIED TO THE EUROREGION



Source: Author's elaboration

**Table 1. Hotel infrastructure in the Euroregion (data 2001)**

	5★	4★	3★	2★	Total Hotels	Total Beds	Extra Beds*
<b>Galicia</b>	4	39	101	152	296	27.098	41.250
<b>North of</b>	6	27	39	28	100	15.918	12.661
<b>Portugal</b>							
<b>Total</b>							
<b>Euroregion</b>	<b>10</b>	<b>66</b>	<b>140</b>	<b>180</b>	<b>396</b>	<b>43.016</b>	<b>53.911</b>

(\*:Extra beds correspond to all those not listed as hotels).

**Table 2. Rural Tourism accommodation in the Euroregion (data 2001)**

	TH/Manors	TR/Rustic houses	AG/Farmhouse	Total Rooms
<b>Galicia</b>	42	234	66	3.813
<b>North of</b>	101	135	47	2.597
<b>Portugal</b>				
<b>Total</b>	<b>143</b>	<b>369</b>	<b>113</b>	<b>6.410</b>
<b>eurorreg</b>				

**TH:** Turismo de habitação, **TR:** Turismo rural, **AG:** Agroturismo (acronyms for the Portuguese denomination)

Source: Author's table with data from Turgalicia (2002) and Dir.Gêral de Turismo (2002)

**Table 3. Simplified matrix products- resources**

<b>Resources</b>	<i>Natural Her</i>	<i>Ethnogr Her.</i>	<i>Cultural Her</i>	<i>Ethnogr Her</i>	<i>NaturalHer</i>
<b>Products</b>	<i>(Water)</i>	<i>Immaterial</i>	<i>Historic</i>	<i>Material</i>	<i>(Landscape)</i>

***TOURIST PRODUCTS MAIN NUCLEI***

<i>Craft-works</i>					
<i>Road to Santiago</i>					
<i>Conferences</i>					
<i>Fairs and markets</i>					
<i>Festivals</i>					
<i>Ethnographic Routes</i>					
<i>Historic Routes</i>					
<i>Wine Route</i>					
<i>Monument Routes</i>					

***TOURIST PRODUCTS CROSS-BORDER AXIS***

<i>Craft-works</i>					
<i>Road to Santiago</i>					
<i>River cruises</i>					
<i>Fairs and markets</i>					
<i>Local Festivals</i>					
<i>Food</i>					
<i>Natural parks</i>					
<i>Thermalism</i>					
<i>Beaches</i>					
<i>Ethnographic Routes</i>					
<i>River Mills Route</i>					
<i>Trekking</i>					
<i>Fishing</i>					

*Web sites: lines.//Leaflets, guides:shady.*

*Source: Author's table using municipal tourist guides (2002)*