

TOURIST INVIGORATION OF THE RIOTINTO MINING RIVER BASIN

(HUELVA, SPAIN)

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SUMMARY

In this paper the case of the mining river Basin of the province of Huelva is treated (Spain), centered in the potentialities of its pyrites strip, mainly as from, the resources of the locality of Minas Riotinto and of the initiatives carried out there. The giving of value of that mining, tangible and intangible patrimony, with a tourist purpose has to be done as from the knowledge of the behavior of the tourist and the key matters that determine their satisfaction. To this end, the results of the field work carried out among the visitors to the Riotinto Parque Minero are exposed.

KEY WORDS: Industrial patrimony, Mining, Tourist Behavior, Tourist Satisfaction.

INTRODUCTION

The Riotinto Mining River Basin has an extension of approximately 640 km², occupying a central position in the communications road system of the province of Huelva. From the administrative point of view it is composed of seven municipalities: Berrocal, El Campillo, Campofrío, La Granada de Riotinto, Minas de Riotinto, Nerva and Zalamea La Real, among which their 17,377 inhabitants distribute themselves, according to data of 2008¹.

Figure N° 1. Geographical position of the Riotinto Mining Basin



Source: Association for the Rural Development of the Riotinto Mining Basin

The Riotinto Region is one of the best exponents to understand and to know the historical evolution of mining operations in the European southwest through different civilizations. This territory locks up within itself important patrimonial resources which can be key matters for the knowledge of the cultural diversity that has characterized the successive mining societies (in economy, technological, political, social, commercial and of the interaction man-environment) as far as to what has supposed the taking advantage of the mining resources in this Huelva center, as well as to understand the historical trajectory of the territory itself that today conforms the province of Huelva (Ruiz Ballester, et al., 1999).

The chronology that includes the identity of the Region locates itself between prehistoric time, really from at least the III Millennium, between 3000 and 2500 before our

¹ Total population according to the Multi-territorial Andalusia. Information System (Andalucía's Statistics Institute): <http://www.juntadeandalucia.es:9002/sima/smind21.htm>

era, and the present day, highlighted as a territory of exploitation throughout different historical stages, with intervals or periods of time in which the total or almost total absence of mining operation has agreed with a greater depopulation, element that is added to other factors that reflect the importance and entailment of mining to the ways of life of the exploiting societies of this territory.

In present day society, the increase of free time, the availability of economic resources, the necessity to have a great variety of activities from which to choose, all this related to a historical awareness and a generalized demand of knowledge, has caused the increase of the interest for traditional elements, as well as the historical patrimony and the technological evolution in situ, not only as de-contextualized elements exposed in a museum, but exhibited in the context in which they appear.

The eco-museums integrated in mining territories give option to the protection of a rich and varied cultural-historical and natural patrimony, especially themed in the geologic and mining patrimony, whose final aim, after works of protection and intervention is its giving value for the public to visit. This patrimony can be invigorated by means of different resources, like reproductions at natural scale of mining works in their geologic environment, or associated facilities in which are shown the mining or natural processes. Therefore, all related to the work of exploitation, as from the industrial, social, architectonic, archaeological, technical, and economic, point of view could be included, always within a historical framework that gives it sense and explains it.

Thus we can differentiate two types of patrimonial elements: on one hand a natural patrimony formed by the deposit and its environment; on the other hand an anthropogenic patrimony formed by the workings and mining facilities of all kind.

With these invigorating activities one tries, then, to restrain the degradation of the geologic patrimony, mining-industrial and of associated natural environment, trying to conserve it, at the same time as fulfilling a didactic work, showing society the processes, methods and techniques used in the obtaining of minerals and, really, all which is related

with their exploitation and to the history of the peoples that have occupied this territory. Without forgetting its ludic purpose.

One proposes, really, to carry out activities like a shock plan to remedy the imminent danger that all the mining-industrial patrimony is undergoing which was generated by the exploitation of the Riotinto mines throughout history. For that we understand that we should elaborate and to put into practice a director plan of generic character on the goods to be preserved, that are practically integrated, described and catalogued in file BIC (Cultural Interest Goods)² (Romero et al., 2004), in the category of Historical Site of the Riotinto-Nerva mining zone, already made by the Council of Culture of the regional government (Andalusia Junta).

DEVELOPMENT

The Patrimony as a Tourist Resource

The mining crisis of the onubense pyritous strip, that has its beginnings in 1982, with the first closing of the line of copper production, has been causing in the Riotinto River Basin great structural problems, like high rates of unemployment, economic deactivation of other mining subsidiary sectors, great emigration of young sections of the population, etc., that together with the historical lack of an effective planning of economic activities and enterprise alternatives, has caused that the instruments of local development used recently are not obtaining the desired results.

Any serious analysis that is done in the Basin for the possible search of alternatives, is going to determine that the territory as much as the population have traditionally been noticeable for their mining operations.

2 It is the protection figure regulated by Law 16/1985 of Spanish Historical Heritage (BOE of June 29th, 1985), which covers all cultural property, tangible or intangible which reveal artistic, historical, archaeological, ethnographic, documentary, bibliographic, scientific or industrial interest.

The mining patrimony of Riotinto, that until very recently had a purely archaeological character, is being also equally conceptualized as landscaping, ethnographic, anthropological, historical and, mainly, industrial.

We consider that the vision on the patrimony has to be flexible and dynamic, since it is to identify in it the set of elements and social practices through which a group tries to know and to represent itself. Thus, the patrimony acquires total sense as part of the processes of collective identification.

The basic lines of action could be structured in the following sections:

1. - The conservation and restoration of the cultural and historical patrimony, as much from the archaeological and industrial point of view.
2. - The study and research of the mining history through the material and immaterial remains have been overlapping during a long historical process.
3. - Regeneration of the environment.
4. The diffusion of the historical-cultural values enclosed in the environment mentioned, with formative and educational programs.

Mining patrimony with tourism in the mines must not be confused. It would be possible to theorize much on these concepts, but it is not the objective of this paper. However, yes it is possible to emphasize that the patrimony is constituted by the personal property, real estate and intangibly generated goods, through history, by man's extractive and productive activities. These properties are inserted in a landscape or certain surroundings that also have to be protected as the industry is a direct consequence of the use that society does of natural environments and is a reflection of how it affects the transformation of this one, and not only as a susceptible element of its given value from the tourist point of view.

There is no doubt that the mining activity had ordered the life, the customs and until the feeling of the region during all their history; reason why it becomes necessary, from the mining crisis and of the consequent loss of its intrinsic values, that associations, enterprises

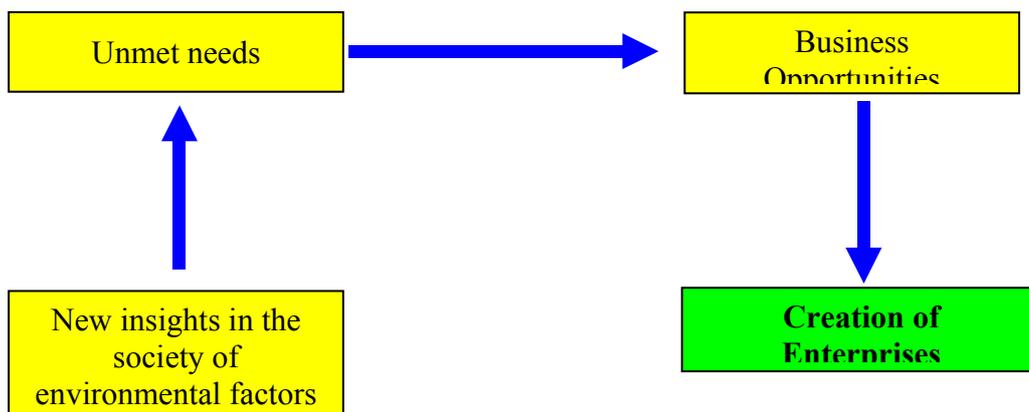
and institutions promote and canalize the socio cultural actions in this territory, acting as from the referring identifier of the mining patrimony.

Lately, the economic and social scene of the majority of the developed countries has favored the growth of the enterprise activities having to do with rural tourism.

The new enterprise oriented initiatives put into practice, towards rural tourism in the province of Huelva have counted with the support of two institutional instruments of development of rural means: Communitarian Initiative LEADER (French abbreviations that means Connections between Actions for the Development of Rural Economy)³ and Operative Program PRODER (Program of Development and Economic Diversification of Rural Zones)⁴.

The elements that take part in the people who undertake a new enterprise project are many. However, the personal characteristics of the same are fundamental to achieve enterprise success. In any case, nowadays the creation of enterprises in the tourism sector has to go together with the new perceptions that society has of the environmental factors. See figure N° 2.

Figure N° 2. Relationship between the perception of the environmental factors and the creation of enterprises



Source: Own elaboration.

3 This initiative was financed by the European Union Structural Funds, designed to help rural agents to focus on the potential of their region, focused on the association and networks for exchanging experiences, promoting implementation of sustainable development strategies.

4. A community program, to promote development and economy diversification of rural areas, favoring initiatives and activities that generate employment and wealth of an area.

A Museum of the Territory in the Riotinto Mining Basin?

Concepts

Like in other places, the giving of value of the mining patrimony will have to be able to generate employment and income through initiatives of this kind, helping to modify the social and patrimonial degradation caused when closing the old mining exploitations, and also, if the geologic-mining conditions allow it, through the creation of interpretation and research centers..

It is clear that one would have to select those areas better conserved from the point of view of its patrimony and from its meaning within a historical explanation, as well as most representative from the geologic-mining point of view.

The Riotinto Mining Basin has a great variety of them. Two photographic examples follow:

Figure N° 3. Aerial View from Watchtower and faulty folds in Peña del Hierro.



Source: AIRPLUS, S.A.



Source: E. Romero

In the technical documentation elaborated on the Riotinto Mining Basin for the BIC declaration, within the framework of the Historical Site, those patrimonial elements were exposed which from the social, cultural, architectonic, industrial, ethnographic and archaeological point of view are susceptible to preservation and conservation, such as those seen in the attached photos:

Figure N° 4. Elements eclared of cultural interest in the Riotinto Mining Basin



Anglican chapel in Bellavista District



Advice House



English cemetery in Bellavista District



El Valle Station



Canaleos Cementation, cerda in Zarandas



Teleras in Masa Planes



Roman road in Peña del Hierro



Roman town in Corta Lago

Types of activities and action project

The objective that is usually desired with the Parque Minero is double. On one hand, the recovery of a degraded space that contains a valuable patrimony, which, on the other hand, is offered to the public for its knowledge, and enjoyment, or to the scientific community for its study. Riotinto Mines have good examples of both types, as much by the activities of the Riotinto Foundation and its program of activities, as by the scientific action of the NASA, in waters of the Tinto River.

It is also well-known as an interesting alternative for the use of certain mines with therapeutic aims (this possibility is a reality experienced by thousands of people in diverse underground Parque Mineros). Therefore, the main activities to be programmed could be:

- Leisure, cultural and pedagogical activities.
- Scientific activities.
- Therapeutic activities.

These activities would entail cultural and pedagogical programs (mining technique didactics and Earth Sciences) and leisure (compatible relaxation activities as the previous one).

In the most general cases, a mining territory can be divided in seven great action areas:

- The mine (underground and open air explorations).
- Covered mining facilities.
- Outside facilities.
- The mining neighbourhood.
- The mining territory.
- The archaeological deposits.
- The communication channels and livestock routes.

The transformation of a mine, in this case the Riotinto Mining Basin, in Museo del Territorio, would need to undertake a series of actions that must be properly programmed,

studied and coordinated, to be able to reclaim the patrimonial value of the mining zones condemned nearly without remission to forgetfulness and abandonment, when the time has just passed from its maximum activity, or when the purely esthetic perception has not yet been consecrated due to the custom. One would then try, to show the mining patrimony in the daily life of his surroundings, in an integrated form and contextualized patrimony.

In fact, in Riotinto the industrial patrimony material is practically dismantled, should we except the mining machinery and industrial buildings that were in use until not many years ago in the exploitation of Cerro Colorado.

Evidently one does not refer to the material and immaterial culture, throughout its history, of the mining productive process, but of the industrial patrimony in itself. Where are all the industrial buildings and factories that existed in Riotinto, constructed at the end of XIX century and during a good part of XX century, for the transformation of its minerals (in Riotinto there were three acid factories, other for smelting, sulfate factories, laundries, concentrators, crushers and mineral sieves, chimneys on numerous facilities, cementations, etc.)? That is without enumerating the impressive material in tools and machinery which existed, of which practically nothing exists.

The only thing conserved, and not without great concern of restoration and conservation on behalf of the Riotinto Foundation, is the Mining Railroad, that could be said to be the jewel of the crown of the Parque Minero. By all this, the Mining Historical File, also an industrial patrimony has become the historical memory of the mining culture. As far as to the conservation of buildings, districts, etc. constructed as a result of the mining exploitation, but of purely civil character, many well conserved examples have been kept.

Up till now the reusability and giving of value of the Riotinto mining industry patrimony has been the one that is shown in chart N° 1.

Chart N° 1. Resources and uses of the Riotinto mining industrial patrimony

name	typology	primary use	present use
Railroad Riotinto	mining transport	Mining railroad	Tourist railroad

Foundation			
File Riotinto Foundation	Work Agency	File English company	Historical file
Barrientos supermarket	Cooperative (Nerva and Riotinto)	Warehouse of the company	Supermarket
Museum Ernest Lluch	Mining hospital	Hospital	Museum and Health Center
Bellavista	Residential district	Houses of the British personnel (Staff)	Houses of the medical and directive personnel
House 21 (Bellavista)	Staff House	Staff House	Ethnographic museum
Railroad Station.	Railroad Station	Tansport Station	Nature Center. Youth Hostel
Factory	Factory Station Nerva	Merchandize Warehouse	Railroad Friend's Headquarters
Mine Workshops	Workshops	Parts Repair	Dye factory
You screen Naya	You screen	To sift mineral	Factory crazy tourism
Well Plans	Winch	Mining well	Museum Front
Rotilio well	Winch	Mining well	Environmental Ensamble
Peña Hierro Well	Winch	Mining well	Tourism Office Nerva
Peña Hierro Mine	Mine	Mining facilities	Environmental Ensamble. Tourist activities
Peña Hierro Short	Short bank	Mining exploitation	Tourist lookout point
TELERAS	Mineral calcination	Teleras	Non determined
SHORT WATCHTOWER	Opencast	Mining exploitation	Tourist resource
Corta Peña del Hierro	Corta open air	Mining Exploitation	Tourist resource

Source: Own elaboration.

Proposals

The management of the cultural patrimony, oriented almost always towards tourism, has become a revitalizing instrument of the local development in the zones where the traditional economy sectors entered into an alarming decontamination.

In Andalusia we have numerous samples of proliferation of ideas and multiplicity of solutions to surpass the economy decadence. In the case of Riotinto Mines, as a result of the most severe crisis of copper mining, the cultural patrimony is being used as a resource of endogenous development. The industrialization and the testimonies of social history and

technique have stopped being a remora and have become resources for the local development, with cultural and tourist aims.

An interrelation between the mining population and its history should be established, so that, in its museum graphic explanation, it includes the surroundings, landscape, customs, etc., and serves to establish the identifying bonds between both. It is for that reason that it must become a factor of invigoration of the mining territory and be the main reference of cultural tourism. It is necessary to integrate the patrimonial elements scattered in the region, under the guidance of the transformed natural media and the mining landscape, which is really none other than the result of the symbiotic relation that took place between this one and the cultures or civilizations which transformed it.

Due to its multidisciplinary character, to carry out this proposal of musealization of the territory it would be necessary, the intervention and coordination of people with qualification in different fields, such as archeologists, engineers (technicians) in mines, historians, architects, anthropologists, museologists, and experts in tourism who would lead the project with a joint vision of it.

Possible proposals of action would be:

A. - Recovery of symbolic buildings

- Advice House (possibility of transformation into an English kind of hotel).
- Anglican chapel (as a center for concerts and conferences).
- English cemetery.
- El Valle Railway Station (interpretation center).
- Mesa de los Pinos or Alto de la Mesa Houses of the mining district, (possible offer for rural houses).
- Rehabilitation of the house-offices and direction of Peña del Hierro (rural tourism).

B. - Itinerary

- Transformation of the railway section Peña del Hierro-Puente del Jaramar into a greenway.

- Transformation of the railway section Minas de Riotinto-Nervas - Zalamea la Real into a greenway.

- Preparation of diverse itineraries next to Riotinto for pathways.
- Adjustment of the old Roman roads.
- Geologic-mining itineraries of interpretation.

C. - industrial Elements

- Preservation and rehabilitation as interpretation point of interest in the Tealeras zone.
- Preservation and conservation of the existing channel systems (Cerdeña, Planes and Peña del Hierro).

- Corta Atalaya, Cerro Colorado and Peña del Hierro.

D. - Other elements

- Conditioning of the golf course.
- Conditioning of Zumajo as camping, picnic, aquatic sports and bathing site.
- Conditioning of the diverse archaeological excavations.
- To potentiate the connection of the British route with other points of interest in the province of Huelva.

- Spreading of the culture and folklore of the region.

Tourists' Opinion: the Experience of the Riotinto Parque Minero

In any case, the definition of the activities to be gathered in an integral plan of tourist invigoration has to consider the motivations and the behavior of the consumer of these leisure services. In this sense, there is no doubt that the most interesting experience at province level is the one of the Riotinto Parque Minero, for that reason we have concentrated on it to get to know better the profile this kind of tourism, notwithstanding understanding that the scope of this action will go beyond this municipality, at least, to all the region. In particular, we will next summarize the results of the empirical work done⁵ to discover the

⁵ We used a random sampling. The number of observations obtained were 400, which, with reference to a total population of 73,900 visitors (in 2007), determines an error margin of 4.73% (5% below normal) and a confidence level of 95 %, with 50% population variance. The questionnaire was handed over to tourists for completion during the return railway journey from the Parque Minero de Rio Tinto, having at all times as support and for clarification purposes the help of three pollsters. The

socio-demographic profile, the attitudes, opinions and behavior of the tourists who visit this mining locality, in an attempt to deepen on the possibilities that the mining tourism has in the municipalities of the region with resources of this kind.

As to the socio-demographic profile of the Parque Minero visitor

The results of the study reveal that the average socio-demographic profile of the visitor of the Parque Minero is the one of Andalusian between 30 and 44 years of age, employed – by other people or on their own account, who has high school or university studies, being residual the presence of people without studies. Three provinces - Huelva, Madrid and Seville concentrate half of the national visitors. In the case of the onubense travelers, more than 80% of the visitors come from the South third of the province, being extremely few the numbers of visitors from their own Mining Region zone.

As to the motivation of the visitor to the Parque Minero

In terms of motivation, the reason that in any case takes the tourist to visit the Parque Minero is the learning experience, there not existing a motivation of circumstantial entertainment or, far less emotional. In fact, the motivation that the visitor shows of the Parque Minero is quite reduced, when not surpassing in none of its three modalities the central value of 4.

The people who go to the place do so mainly to see the landscape, the mining world and its history. In any case, this interest to get to know seems the result of curiosity of the inexpert more than of the deep desire of the scholar, something that corroborates the low personal knowledge the average visitor knows on the mining world and its history.

In any case it is necessary to say than among the older age group, retired and pensioners, the entertainment, is to spend a day outdoors, relaxed - and circumstantial factors, a reasonable price or the inclusion of the visit in the trip program, yes these are quite

questionnaire, administered during the months of July and August 2008, was designed in accordance with the structure presented in earlier studies published by various authors (Beeho and Prentice, 1997, Chandler and Costello, 2002, Conesa et al., 2007; Confer and Kerstetter, 1996, Confer and Kerstetter, 2000; Davis and Prentice, 1995, Keng and Cheng, 1999, Kerstetter et al., 2001; Laws, 1998, Moscardo, 1996; Poria et al., 2004, Taylor et al. 1993; Yeoman et al., 2007). Univariate statistical techniques were applied, bivariate and multivariate for data processing.

motivating to carry out the visit to the Parque Minero and the motivation of learning becomes greater among the people with management responsibilities (that is to say, of higher professional level) that go to Minas de Riotinto.

Degree of interest by other experiences of Industrial Tourism

The tourist shows a degree of average interest in knowing other experiences of industrial tourism in the province, mainly those to the mining tourism and the onubense agro-alimentary industry in the elaboration of wine, Iberian ham and of olive oil.

In the opposite side, the processes that less awake interest among the visitors to the Parque Minero are those which have to do with the Chemical Industry and Basic, such as the operation of a power plant of combined cycle, oil refining or paper manufacture, appearing as an exception due to its relatively high interest degree the smelting of copper, something comprehensible by its entailment with the mining industry.

The degree of interest by almost all the experiences suggested as Industrial Tourism in Huelva, have a direct relation with the learning motivation, so that it is the visitors who with greater intensity present this type of motivation to visit the Parque Minero, those that also show greater interest to know and visit new experiences in Industrial Tourism.

As to the behavior of the tourist/excursionist (qualitative variables)

Half of the visitors to the Parque Minero, travel mainly to the locality of Minas de Riotinto, due to their desire to visit their mining resources, which reveals the excellent desire and tourist attraction the locality has due to its mining patrimony and its English legacy. A third of those who travel to the Park are excursionists, the rest are tourists which remain an average of almost ten days away from home, highlighting as to this, people who are making a trip of several days within the province of Huelva and which represent 40% of the total of visitors.

Nearly 70% of the visitors to the Parque Minero de Riotinto have decided to spend the whole day in the locality and this visitor does this trip or excursion accompanied by his family or his parter, being residual the contingent that makes this trip alone, with fellow workers or

in organized group. A third of the tourists has not visited nor thinks of visiting any other mining enclave of the zone, one of each five visitors, thinks of travelling to another province mining place and one of each six to two the more.

Aside from the Parque Minero, the rest of onubense mining resources are not well-known and the intention of the tourists to travel to them is quite reduced. Thus, the mining sight with greater intention of visits turns out to be the municipality of Nerva and however, only a third of the visitors to the Parque say that they have already visited it or that they think of doing so.

As to the behavior of the tourist/excursionist (quantitative variable).

The average daily expense per person visiting the Parque Minero is of 41.5 €/person per day and is similar to the one which characterizes the onubense tourist cultural demand -41.08 €-. This variable diminishes when increasing the emotional motivation of the visitor and becomes minimum between the group of older age, retired and senior citizens who mainly make the trip with their family motivated by friends' visits or relatives or to visit the mines; on the contrary those who go to the locality for business reasons or work and those who travel alone or with fellow workers incur in a higher average daily cost.

One estimates that the tariffs of the Parque Minero represent between 7% and 41% of the visitor's average daily cost. Due to this these numbers evidence that the income produced by the mining tourism goes far beyond the entrance tariff to the attractions that this offers, being necessary to enjoy suitable infrastructures and sufficient tourist supplies - hotels, restaurants, cafeterias, businesses, etc. so that most of these revert in the inhabitants of the mining municipalities themselves, contributing in this way to the generation of wealth and use in zones endemically depressed but with an enormous tourist potential.

In fact, if we extrapolate the average daily cost of this sample to the 73,900 people who visited the Parque Minero last year, one obtains a tourist income of a little more than 3 million Euros, which in a great extent leaves the Riotinto mining region due to the deficiency of an adequate tourist offer.

As to the knowledge of the destination and the mining world

Nearly a 30% of the visitors to the Parque Minero have knowledge of the onubense locality of Minas de Riotinto and its Parque Minero, thanks to the recommendation of friends or relatives, which gives an idea of the importance that the informal channel mouth-ear acquires as a form of promotion of this experience of Mining Tourism. However, other two formal channels are Internet and the brochures and tour guides, constitute as two very important means of promotion. The comparison of these results obtained in a similar study done two years ago reveals an increase of the effectiveness of the campaign of formal promotion of the Parque Minero, something that has also been seen in a progressive increase in the annual number of visitors.

Generally, the personal knowledge on history and the mining patrimony of the visitor to the Park is low. Three of four recognize to have a low or null knowledge on the mining history and resources, being residual the presence of experts or people with high knowledge on the matter. There is a linear and direct relationship between the knowledge, on the mining world and the Interest for the industrial tourism and the visit to mining mines and other resources in particular.

As to the degree of satisfaction with the visit to the locality and its tourist offer

The degree of satisfaction of the visitor, be it with the visit, as with the global tourist supply surroundings and industry of Minas de Riotinto, is quite high - qualifications of 7.6 and 7.3 respectively within a scale of 1 to 10-. It is not strange therefore, that 92% of the tourists recommend the visit to the place, percentage that rises as age increases, the interest for industrial tourism, and the knowledge on the world of the mine and the satisfaction with the visit of the person surveyed. The satisfaction degree also increases with the motivation of learning, the degree of knowledge on the mining world and the interest for Industrial Tourism.

In global terms the factor of the tourist supply is the tourist Riotinto Industry better valued by the visitors of Parque Minero -7,7-, followed of tourist surroundings -7,2 - and being the relation last quality price -6,9-. The aspects better valued by the visitor are the

natural and human surroundings of the locality and the worse one - in all case with an average next to a remarkable one, are the communications, the signaling and the information.

The visitors with reduced motivation of any type, experience the smaller levels of satisfaction with the industry and the tourist surroundings of Minas de Riotinto, with the relation quality/price of their tourist supply and generally with all the tourist supply.

As to the degree of fidelity of the visitor

With regard to the fidelity degree, to indicate that little more than a quarter of the visitors of the Parque Minero previously affirms to have visited the locality of Minas de Riotinto, although it is remarkable that a 6% of the tourists indicate that it has visited the municipality in more than five occasions already. The fidelity degree increases between the excursionists, who travel single or accompanied by fellow workers, those whom they go mainly to the locality for business reasons, work, meeting or to visit friends, and between those who have a high personal knowledge of the mining world.

Identification of archetypes with base in the motivations

To the matters that occupy us, we specially understand the motivational aspect, identifying the different existing archetypes in this group.

Having done a hierarchic analysis of conglomerates (using the Euclidean distance to the square and Ward's method) as from the three blocks of motivations expressed in the questionnaire (of learning, of entertainment or circumstantial, and of emotional type⁶, four clusters were identified:

1. - The predominance of the emotional component is in the first of them, which include 25.2% of the observations. This motivation is accompanied with a very slight desire of learning.

⁶ Previously an analysis of main components was carried out, in which it was proved that the eighteen items of the questionnaire were correctly grouped in the three factors referred to in epigraph 4.2. Later on, this grouping was validated by a discriminating analysis, which determined that 89.9% of the cases were correctly classified.

2. – The most numerous, 31.5% of the cases, is the one of the visitors with a learning motivation.

3. - The one of the visitors with predominance of motivation of entertainment or circumstantial, that agglutinates 16.1% of the observations.

4. - And finally those without a concrete motivation, 27.2% of the cases, which turns out to be the second in importance from a quantitative point of view. It is seen as remote, mainly in learning motivation.

The tests of differences of averages show some statistically significant differences in their respective profiles, in particular in relation to the variables of age (significance level 0.008) and satisfaction with the visit (significance level 0.000). Thus:

- The youngest usually are characterized for the lack of a defined motivation, whereas older ones tend towards circumstantial motivation or of entertainment.

- In those in which the emotional motivation prevails the satisfaction with the visit, is usually greater than the average 8.03, whereas the smaller levels of satisfaction are obtained between those devoid of a concrete motivation (7.13).

As to the level of studies, although the tests (in particular the Kruskal-Wallis test) they do not show significant differences, it draws our attention that the conglomerate of those without a defined motivation is the one that concentrates a greater percentage of college students, although very near the group with learning motivation. On the contrary, the level of studies is clearly inferior in the collective emotional.

To sum up, their basic profiles are the following:

- Archetype 1: emotional motivation, lower level of studies and higher satisfaction.
- Archetype 2: learning motivation (it is the most numerous).
- Archetype 3: motivation of entertainment or circumstantial and older age (is less numerous).
- Archetype 4: without concrete motivation, younger, with higher level of studies and less satisfied with the visit.

CONCLUSION

As from the existing sensitivity in relation to the cultural patrimony of the Riotinto Mining Basin, very clear in the corresponding BIC declaration and the corresponding reports, one needs lines of action for the preservation, conservation and giving value to this rich patrimonial legacy, that was in its time an important part of the industrial revolution in the province of Huelva, besides being considered the oldest mining of Spain.

Within this context, the project of, a Director Plan, of the Mining-Industrialist Patrimony of the Pyritous Onubense Faja⁷ has been elaborated

As actions for the giving of value of the historical patrimony in the Riotinto Mining Basin we propose the following:

A) Giving value to the archaeological patrimony:

- Consolidation of exhumed structures.
- Cleaning of the archaeological sites.
- Design of historical route through the chosen archaeological elements insofar as they serve as a speech to understand the settlement and the exploitation of the mining resources in Roman times.
- Creation of explanatory panels to make this patrimony understandable.
- Creation of a monetary reserve fund for future investments in relation to the constant maintenance and tidying-up of the archaeological patrimony which can be visited.

B) Giving value to the industrial archaeological patrimony:

- Protection and giving value to the teleras of Masa Planes.

⁷The Master Plan aims to establish some guidelines on programs so that thus, one can have a tool which allows planning the order, modernization and maintenance of the mining and industrial heritage. Therefore it seeks to establish the goals and programs that will make compatible the mining exploitation with the environment, along with an orderly use, efficient and adequate safety of geological, mining and industry resources, while contributing to the economy development, social welfare and job creation in a sustainable and rational way.

- Reactivation of different kinds of mining works for their public diffusion: zafreros, barrenos, metallurgists, recovered railway spaces dedicated to these works as cortas mineras, smelting, railway elements.

- Giving value to the pyrite chimneys.

- Giving value to the industrial remains of Sieves, explaining the diverse types, techniques and work processes.

- Giving value of tunnel 16 of Zarandas-Naya.

- Visits to the interior spaces of the mine to understand geology, diverse forms of mining exploitation and typology of mining works inside and outside.

C) Giving value of the ethnological patrimony:

- Visual document recovery on the work and forms of life of the Minas de Riotinto and use of the projections for their public diffusion.

- Recovery of old roads used by the miners to accede to the work in the mines.

- Recovery of the Huelva mines flamenco songs.

- Giving value of the different prototypes of mining houses: El Valle, Bellavista, Alto de la Mesa, and Tío Potaje Caves.

D) Giving value to the industrial patrimony:

- Recovery of implanted representative elements of the industrial revolution in the region.

- Recovery of winches as unequivocal symbol of onubense mining.

- Recovery of industrial buildings related to extractive activities.

- Recovery of symbolic elements of the underground and open-air mining.

In any case, the actions of giving touristic value of said patrimony has to take into account the kind of tourist, who in the case of the visitor to the Parque Minero de Riotinto presents the following fundamental characteristics:

- Profile: Andalusian Excursionist-tourist between ages 30 to 44.

- Motivation: Learning (low level of knowledge on mining).

- Interest for: the cultures of Iberian ham, wine, olive oil, as experiences of industrial tourism.

- Travel: families or couples.

- Average daily cost: 41.5€.

- Knowledge of the destination: mainly through recommendation of relatives and friends, although it increases its importance by means such as Internet and brochures.

- Satisfaction with the visit (average): 7.64 (on 10).

- Main areas of improvement in the offer: infrastructures and signaling.

- Recommendation to visit: in 92% of the cases.

- Fidelity: 27% (degree of repetition of visiting the locality).

To sum up, we understand that it is of special importance:

Not to defraud the expectations of learning of the visitors, for which the professionalization of the service is essential.

The capacity to offer a mix of tourist attractions that reinforce the capacity to attract visits and prolong their stay.

- To work with a joint vision of the region so that the activities that are carried out in the municipalities that integrate it have a complementary character from the tourist point of view, being able to reach an articulated museum space.

- It must include activities and services for children, which in the families play a very outstanding role.

- The mid daily cost of the cultural tourist is superior to the average; in this sense, a matter still pending in the region is to increase the lodging possibilities.

- It must improve the presence and marketing in the Internet.

- In addition to certain infrastructures (like those of lodging, already mentioned, and those of transport), the signaling must be improved.

- It is precise to re-invent the supply periodically to bring about the repetition of the visit.

BIBLIOGRAPHY

Please refer to articles Spanish bibliography.