

ANALYSIS OF ACCESSIBILITY TO PUBLIC TRANSPORT IN GARAJONAY NATIONAL PARK (GOMERA ISLAND): PROPOSAL FOR CORRECTION

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This paper is part of a larger project, carried out between 2012 and 2013, in order to analyze the viability of establishing sustainable transport between different sites on the island of La Gomera, especially those who had an attractive tourist nature. As can be seen by both the title of this paper, we only focus here on Garajonay National Park, an area that represents only 10% of the island, but with a primary attraction for those who choose to visit the island.

To make this work, we make a diagnosis in the first transport in the National Park (visitor demand, parent of origin and destination, daily and hourly concentration, etc..), Also identifying the main nodes of sightseeing largely linked with hiking, although viewpoints, etc.

All this is aimed at identifying key accessibility issues detected (absence of nodal connectivity regular public transport, poor planning schedules, the lack of signage adapted to the environment, etc.). We bring relevant solutions in each case.

Making a brief statement Garajonay National Park, we can say that this space was created under Law 3/1981 of 25 March. This space was also declared a World Heritage Site by UNESCO in November 1986. This National Park is characterized especially by the lush forest that develops there and which, remember is a relict of the flora that existed on the shores of the Mediterranean in the Tertiary. The objectives of the National Park main aim to protect the geology, fauna, flora, vegetation, water and atmosphere and archaeological values and, ultimately, the entire ecosystem of the National Park.

The National Park covers an area of 3,984 hectares. (just over 10% of the surface area of the island), and extends the highest points of the island. Although no human settlements within the National Park, there is a fifteen towns located in the headwaters of the Canyons around the perimeter of the park, and are included in the Peripheral Protection Zone (4,230 ha.), better known as Pre-park.

We have to highlight the figures: National Park and World Heritage Site, according to a survey for the second half of 2010, we concluded that 49% described as «very important» to his visit that the space was declared a National Park, while another 17% considered it

«important». Almost identical figures were recorded when asked by the consideration of World Heritage, confirming the big attraction for the visit of this space and by extension Island, is the declaration of the two figures.

One of the major impacts of Garajonay National Park is of human pressure. From this point of view, the demand of visitors to the National Park has experienced in recent years continued to increase, except for 2009 when falls in a major way (just over 25%). Yet in the last year, demand exceeded 600 thousand visitors, representing human pressure daily average of more than 1,700 people. However, this amount is theoretical, because the temporary disparity influx is the general trend, with a trend towards concentration of visitors in the summer, especially on Wednesdays and noon time slot. This location point of demand, will be important therefore to analyze the mobility within the National Park and possible alternatives.

According to the survey of *AIDER La Gomera* held in the second half of 2010, the means of transport used by visitors to the National Park to get to this spot it was the car in a 83% (74% was in rental vehicle), followed by regular public transport quite a distance (15%), demonstrating once again and in this case more sharply, the car almost total presence in the Park as the main means of transport, with all environmental problems. To this we should add another 2% of visitors who had access to that place by taxi.

If this increased pressure on the National Park car we add the hourly concentration of the visits that we said above, we have all the ingredients for the increased air and noise pollution. Furthermore, this increase is one of the main parameters that society demands an expansion of the infrastructure for the car, ie the increase in the area devoted to roads and parking lots.

As is clear from several reports, the profile of visitor who accesses the National Park means of transportation demand increasingly sustainable and support to serve its main activity in that place, that is, the hiking. This profile is identified with a high cultural level and high environmental concern, especially for the origin of these (mostly German and Austrian), and very interested in trekking at least three days during their stay on the island of La Gomera . It is a profile that demands a good public transport, since hiking is just an activity, a good part of routes start and end in different places, making it very difficult to use a rental vehicle for this purpose.

We will identify the main problems for land access to the National Park:

1. *Nodal Connectivity*: In the National Park there are several sites that don't have regular public transport coverage and also, are very important in terms of trip generation, as is the case of El Contadero and La Laguna Grande, although also El Cedro, the Visitor Center of Juego de Bolas (outside the Park), Los Barranquillos, etc.. It would therefore be appropriate to at least exist in the first two regular bus connection, while the other would record at least transport connections on demand, which were designed for the relevant routes.
2. *Schedule*: Lines Company regular public transport on the island crossing the National Park (the Cia. *GuaguaGomera*), are the 1st (Valle Gran Rey - San Sebastián de La Gomera), the 4th (Vallehermoso - La Dama) and the 6th (Valle Gran Rey - airport). The last two have only two daily in each of the senses. Particularly in the 1st line, it is

necessary to decrease the existing time dispersion, especially in the sense Valle Gran Rey - San Sebastián de La Gomera in the morning hours, as between 08.00 and 14.00 hours there is no frequency.

3. *Economic accessibility*: From the point of view of economic accessibility seems very relevant bonds implementation to report greater use of this transport, as well as flat rates depending on the distance.
4. *Vehicles for transport*: It is generally detects an oversize of the offer, with 55 seats vehicles in times of low demand, such as frequencies of 05.00 hours between Valle Gran Rey and San Sebastian de La Gomera of 20.30 in the opposite direction, where only recorded 4 passengers in each average. However, in the frequency of 08.00 hours between Valle Gran Rey and the island capital, the demand is high, looking sometimes necessary, but in scarce occasions, the need to expand the service.
5. *Transportation Infrastructure*: Of the ten existing regular bus stops in the National Park, only two have bus shelters, while the others haven't even one of these stops identifying marks. It therefore seems necessary especially enclaves of Las Creces, Pajaritos and La Zarcita, should have at least bus shelters and the rest in a first phase with the relevant signage with appropriate timetables and routes.
6. *Transport of persons with reduced mobility*: At present, there aren't regular service buses adapted to transport these people, so it is a situation that should be regularized in the future, especially by the increasing interest of tourism in *joëlette*.
7. *Bicycle transportation*: In the 18-seater bus is where we find the biggest problem, especially in the first hour of the morning from Valle Gran Rey at the airport, after crossing the National Park. We say this because in a normal situation, this service carries on average about 8 passengers, although not all of them traveling to the island airport. Therefore, if at least half of them displaced luggage, bicycle transportation tends to get complicated, obviously for lack of space.

In short, one of the most important activities that develop Garajonay National Park hiking is tourism, an activity highly demanding regular public transport. We believe that only in the place of El Contadero, would be visited by an average of 330 hikers per day, of which 130 would in a car. At the site of La Laguna Grande, the other major point of concentration of walkers, the figures would be almost 270 newspapers and more than 100 a day by car.

As a result primarily of the deficiencies nodal time experienced by regular public transport in connection with the National Park, and that is reflected especially in the line 1st between the towns of Valle Gran Rey and San Sebastian de La Gomera, growth affluence in of private vehicles, especially hire cars, has experienced a major boom in recent years, with an estimable disorder as to need new space for parking, air and noise pollution, etc.

Therefore, we have undertaken an analysis methodology of accessibility, identifying about 14 main nodes in the National Park, demanding regular public transport, although only 5 of them have access to this mode of transport, ie less a third of the considered. Furthermore, much of the affluence of visitors is concentrated in nodes that aren't accessible to regular public transport, such as particularly La Laguna Grande and El Contadero. If we add the mentioned time inaccessibility for the 5 nodes connected to the rest of the island network,

a pricing policy isn't incentive, poor adaptation of vehicles for transporting bikes etc., evidence is require a significant change of direction in how to operate regular public transport in that symbolic landscape.

In short as final proposal to comply with the above mentioned, we have recommended a complementary transport line in the Garajonay National Park covering nodes greater demand for mobility (La Laguna Grande and El Contadero). Also a thorough hourly schedule for lines adjusted to demand, also vehicles adapted to the demand that is experienced as schedules, etc. Is also needed a good policy signaling and adapted to the environment bus shelters National Park. Thus, the methodology applied in this work, can be applied to other symbolic spaces, be they human or protected natural landscapes, in order to implement a sustainable public transport within the trends set by the European Union.