

## CAPACITY FOR TOURIST LOAD AND HERITAGE SITES. APPROXIMATION OF ESTIMATE OF CAPACITY FOR LOAD AT ARCHAEOLOGICAL SITE AT CARMONA (SEVILLE, SPAIN)

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Over the last fifteen years with the impressive increase in tourist flow associated with what has come to be called «cultural tourism,» it has become evident that the problems resulting from massive tourist flow generated at certain cultural tourist sources are numerous and quite serious. Nevertheless, it is clear that if studies on capacity for tourist load have a long academic record, until now there have been few publications or studies that can be traced in relation to application of the concept of tourist sites of historical patrimony. To a certain extent, the operative knowledge generated on capacity for flow in relation to the limitation of tourist visits has not yet gone beyond internal work documents (management plans, visitor norms...) and what is missing is a deeper methodological consideration. Therefore, we find ourselves before a situation that renders evident the imbalance between the extensive bibliography that includes theoretical thought and its limited practical application.

The present situation for tourist-heritage management highlights three key aspects to understand the demand for consciousness that is being generated with respect to the application of the concept of capacity for load at monumental sites. On one hand there is certain preoccupation implicit in the management of some of the principal cultural tourism resources in the world due to problems of tourist overload. On the other hand, over the last years various international organisms have created a doctrine in relation with the need to control/regulate tourist use of cultural resources in the shelter of guaranteeing the preservation of resources, but defending also the need to guarantee the quality of the experience of the visit (Letter of Cultural Tourism, ICOMOS, 1999, Handbook Tourism Congestion Management at Natural and Cultural Sites (WTO, 2005), Tourism at World Heritage Cultural Sites. The Site Manager's Handbook (ICOMOS-WTO, 1993)). There exists as well a certain social response to the implementation of systems of restrictions to access not so much on the part of the tourists or visitors, but more so on the part of the local framework of production in which it is considered negative since these measures might cause certain cuts in potential economic profits.

On the methodological level it is necessary to point out that *a priori* there is no formula that permits us to calculate the maximum number of persons that a determined space can accommodate in its tourist use. From the experience accumulated by the Research Group «Tourism, Heritage and Development» (UCM Complutense University of Madrid) in the development of various research projects, the principles that guide methodological reflection on the approximate estimation for capacity for tourist visits at monumental sites are based on three points. In the first place, it is necessary to determine for each patrimonial site the key areas that define the development of the tourist visit, usually those that present the greatest problems of overload or tourist saturation. It is a matter of estimating for each of the principal elements or heritage resources that compose the space prepared for the visit for maximum levels and optimum tourist use in function of the behaviour of tourist flow, a basic criteria for the later global management of the area. In the second place, it is convenient to separate the fundamental components: a descriptive component and an evaluative component and local capacity. The descriptive deals with information and data related with the objective characteristics of the recreation systems. The evaluative component, on the other hand, weighs how the system should function based on the evaluation of the impact produced by the actual conditions of the visit. And third, the estimation of the local capacity of the heritage resources is closely related to the necessity to guarantee the qualification of the visit (the threshold of tourist use beyond which the quality of the visitor experience undoubtedly declines).

Based on these points it is considered that the maximum threshold for capacity gauge is related to as least three types of criteria: criteria based on density of use (numbers of persons who physically fit into a space of determined dimensions), criteria of management (safety conditions of the space and means of security and control of use) and criteria of tourist behaviour or the conditions under which the visit takes place (the flow of movement, conditions for viewing the site, acoustic contamination....)

These points have guided the estimation of the thresholds of capacity for tourist load at the Archaeological Site at Carmona (Seville, Spain). At this heritage site, open to the public since the end of the XIX Century, the characteristics of the visitor space in the necropolis and the reduced dimensions of some of the tombs have caused concern over the stratification of various thresholds for tourist use and the design of future visitor itineraries with possibilities of controlled access/separating the most fragile spaces. As in any other monumental site used as a museum, the study on the capacity for admittance of load for tourist use of the Archaeological Site presents three dimensions: a physical dimension which refers to the total volume of persons which the extension of the space prepared for the visit can hold at a specific time without endangering the conservation of heritage elements (capacity for physical load of the site), a psycho-social dimension which is related to the quality of the experience of the visit of all those who come to know the site (perceptual load capacity) and an «operative» dimension which is connected with the availability of means (human and economic) which can be counted on to manage the flow of visitors at the site.

The results of the study carried out show how the present numbers of visitors are far from surpassing the thresholds of capacity for physical load which have been calculated approximately based on standards of the use of the space taken from patterns of tourism use from other monuments (the Alhambra) and protected areas (footpaths). At no time during the

year does the number of visitors seem to pass 811, a number of visitors, who remaining at the same time within the interior of the site, would saturate the space prepared for the visit from the point of view of pedestrian traffic. Nevertheless, different scenarios have been suggested with respect to the maximum density of tourist use with the objective of clarifying margins of procedures looking toward future decision making processes related to organization of public visits. On the part of management of the Site, work is being done to improve systems of communication/presentation of the heritage and to determine, to the extent possible, the tourist visit in line with the philosophy of the recently developed Manage Plan for the Site. This is an attempt to join the functions of cultural information on the heritage, the conservation of the excavated ruins, the research and the tourist activity (socio-economic development of the municipality where it is located) in a marked context, in this particular case, due to serious conservation problems (far apart from tourist pressure).

The work carried out on the necropolis of Carmona has facilitated the application of methodologies taken from experiences developed on other tourist complexes and shows the existing relationship between the thresholds of load capacity (density of tourist use), the physical characteristics of the space on which the tourist activity is imposed (in this case a heritage visit) and the behaviour and use with which the visitors conduct themselves at the space they are occupying. In any case, it is a useful instrument, the values of which are related in function of capacity for management which the managing organs develop over the heritage spaces themselves.

