Chapter 60

Information Mycological Systems and Traditional Ecological Knowledge:
The Case of Mycological Tourism in Central Mexico

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ABSTRACT

Wild edible fungi are non-timber forest products that have great relevance for forest communities in central Mexico. Texcaltitlán is a rural community known for its traditional ecological knowledge on the use and identification of wild edible mushrooms. The aim of this work is to link Geographic Information Systems and Traditional Ecological Knowledge, in order to generate Mycological Information Systems. This is a qualitative, quantitative and exploratory research, which seeks to determine the usefulness of Geographic Information Systems (GIS) to systematize and locate mycological resources for use as a tourist attraction. The results show the existence of a wide variety of edible mushrooms in the region, along with a wide mycological traditional knowledge. Both aspects reflect the existence of unique natural and cultural features that can be the basis to build a unique tourism product in central Mexico. It is concluded that GIS are useful tools to build a multifunctional vision of mushrooms.

INTRODUCTION

This chapter is part of a basic scientific research entitled "Evaluation of the recreational dimension of wild edible mushrooms, their socioeconomic interest and their perspectives of rural development", supported by the National Council of Science and Technology of Mexico. This project contains three central components: (i) a participatory approach integrating local stakeholders as promoters of mycological tourism; (ii) generating mycological information systems based on traditional ecological knowledge

and scientific knowledge; and (iii) proposing a strategy for the tourism management of mycological resources in the central Mexican plateau.

Mycological tourism consists of experimenting with the natural and cultural dimensions of wild edible mushrooms, through an articulated offer of goods and services that allow a recreational experience to be lived. Its main activities are the identification, harvesting and tasting of the mushrooms in close contact with the nature and mushroom picking communities. This tourist modality is part of the new trends in rural tourism that are characterized by their high specialization, focused on a product anchored to the territory.

Mycological tourism is an example of the valorization of forests as a tourist resource in contemporary societies. The growing importance of forest spaces as tourist scenarios is associated with the specific characteristics of these ecosystems. This value can be increased by modifying forest management practices; For example, by maintaining the abundance of certain local resources of special interest (Bostedt & Mattsson, 1995). However, tourism exploitation of forests also generates environmental, social and cultural risks (Kuvan, 2005). Aspect by which planning is a central theme.

In the case of Geographic Information Systems, the interconnections between tourism and new technologies not only reveal the location of tourist attractions in a specific territory. Rather, they allow the mobilization of local resources, converted into cultural goods, as a distinctive sign of contemporary tourist leisure (Hannam, Butler & Morris, 2014).

The objective of this chapter is to analyze the relationship between mycological tourism and Geographic Information Systems as a tool for tourism planning in rural areas. All this from a participatory approach in which traditional ecological knowledge serves as a source of information and a point of reference to guide policies for economic restructuring of rural areas.

For this the text is divided into six parts. After this introductory section the relationship between Geographic Information Systems and Mycological Tourism is presented. Later, the use of GIS in the planning of mycological tourism is explored as a tool for generating data that can be analyzed from an integral and participatory perspective for the determination of the tourist potential of the territory and its adequate spatial projection. Later, the case study in a forest community in central Mexico is presented, where the characteristics of the observation unit and the methodological design of the research are discussed. Next, the application of the Mycological Information System is presented, through the evaluation of local mycological resources and a proposal of paths for mycological tourism. Finally, the conclusions and some considerations for the future of the research are presented.

BACKGROUND

Geographic Information Systems Applied to Tourism

The use of local resources for tourism can produce the opportunity to generate processes of socio-economic transformation that help to improve the quality of life of rural inhabitants. However, the introduction of new non-agricultural rural activities such as tourism requires the development of systematized information platforms for the success of development strategies.

In the case of nature-based tourism, many of the resources in which the activity is focused can be documented through spatial information sources that indicate the quantity and characteristics of tourism resources, as well as the socio-economic impacts that can derive from their use as tourist capital.

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