

Rurality, tourism and strategic management for sustainability in the El Zapotal Restaurant-Spa, Tierra Colorada, Mexico

Ruralidad, turismo y gestión estratégica para la sustentabilidad en el Restaurante-Balneario El Zapotal, Tierra Colorada, México

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Abstract

The global population faces the challenge of optimizing the positive actions they undertake in the elements of nature with the purpose of achieving sustainability in rural areas of the emerging countries of the world. Hence, the objective is to expose the tourist potential and management of the area under study a geographical approach. Methodology considered cabinet work for the selection of publications that address the topics: management, territory, tourism and sustainability, complemented with field work such as the three exploratory tours in the area of influence during the Easter holidays and summers of 2020-2022 at the El Zapotal Restaurant-Spa. The results were: *a)* optimal climate-water-soil-vegetation for the practice of national and international tourism; *b)* rational use of existing natural resources and *c)* the tourist experience is complemented by the existence of the Tehuacalco archeological zone, El Zoo Carry and Poza Pinta. Therefore, the conclusions were: 1) the elements of the environment are conserved; 2) regional tourist potential of the Restaurant-Spa El Zapotal and 3) it is important to formulate and apply a program for public use that allows greater dissemination of the site under study to increase the number of tourists who visit it.

Rurality, Sustainability, Tourism

Resumen

La población global afronta el reto de optimar las acciones positivas que emprenden en los elementos de la naturaleza con el propósito de alcanzar la sustentabilidad en sitios rurales de los países emergentes del mundo. De ahí que, el *objetivo* exponer la potencialidad turística y gestión del área en estudio bajo un enfoque geográfico. *Metodología* consideró trabajo de gabinete para la selección de las publicaciones que abordan los tópicos: gestión, territorio, turismo y sustentabilidad, complementado con trabajo de campo como los tres recorridos exploratorios en el área de influencia durante las vacaciones de semana santa y veranos del 2020-2022 en el Restaurante-Balneario El Zapotal. Los *resultados* fueron: *a)* clima-agua-suelo-vegetación óptimo para la práctica del turismo nacional e internacional; *b)* aprovechamiento racional de los recursos naturales existentes y *c)* la experiencia turística es complementada con la existencia de la zona arqueológica Tehuacalco, El Zoo-Carry y Poza Pinta. Por tanto, las *conclusiones* fueron: 1) Los elementos del medio ambiente se encuentran conservados; 2) potencialidad turística regional del restaurante-Balneario El Zapotal y 3) es importante la formulación y aplicación de un programa de uso público que permita mayor difusión del sitio para aumentar el número de turistas que lo visitan.

Ruralidad, Sustentabilidad, Turismo

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Introduction

The environmental paradigm, known as sustainable development and currently in vogue, is the result of the alteration of the elements of nature as a consequence of the economic development model based on fossil resources (IUCN-UNEP-WWF, 1980). Sustainable development applied at the local level, as in this case study, is where the best results are obtained, examples of which are observed in Colombia (Balanta, López and García, 2021); in Spain with the Natural Park "El Hondo" (Niño-Gutiérrez *et al.*, 2015); in insular spaces; in coastal areas such as the case of Bahías de Papanoa at the continental level in Guerrero.

In these times of pandemic crisis and at the socioeconomic level, the leaders of the tourism sector are fully convinced of the urgent participation of the people who make up the various sectors in the industry for the achievement of sustainable tourism with social responsibility in the context of crisis (Guma, 2022), where Mexico and its 32 states are examples of this, and where successful experiences can be seen throughout the national territory (INAFED, 2020). In the area of tourism, the three levels of government are increasingly closer to promote the optimal use of human talent in the different areas that influence economic interests. At the regional level, there are more and more successful cases of sustainable tourism products developed between Sector and local tourism management entities, who, in turn, have strengthened ties and created alliances with productive or potentially tourist communities such as the case under study (Government of the State of Guerrero-INEGI, 2017).

The Guerrero entity is multicultural where nature is also prodigal in climates, relief, hydrology and vegetation (INEGI, 2005). An example of this is also the municipality of Juan R. Escudero, which belongs to that federal entity. According to the National Institute of Statistics and Geography (INEGI) it is municipality 12039, located 260 meters above sea level (masl), northwest of the state capital, between the extreme geographic coordinates 17°01' 17" North Latitude and 17°15'08" South Latitude and between 99°18'27" East Longitude and 99°38'07" West Longitude with respect to the Greenwich meridian, altitude of 179 meters above sea level (masl), extension of 652.

It has an area of 652.6 km², which represents 1.02% of the state's total area and its municipal seat is Tierra Colorada. This municipality is bordered to the northeast by Quechultenango, to the north by Mochitlán, to the northwest by Chilpancingo de los Bravo, to the southeast by Tecoanapa, to the south by San Marcos and to the southwest by Acapulco de Juárez (INEGI, 2021).

The state of Guerrero is a multicultural entity where nature is also prodigal in climates, relief, hydrology and vegetation. An example of this is also the municipality of Juan R. Escudero, which belongs to this state (INEGI, 1998). The general objective of the essay is to expose the tourist potential and management of the area under study and as particular objectives: a) to explain the characteristics of the environment where the tourist product "El Zapotal Restaurant-Spa" is located and b) to contribute to the socioeconomic knowledge of the population involved in tourism in the area under study.

It is important to justify this research, since to date there are minimal publications that disseminate the landscape and tourism attributes of the study area, so this research is expected to contribute to the increase in the number of publications on the study site and thus contribute to the knowledge of this site (Google Earth, 2021). The integral parts of this essay include: introduction, methodology, results, conclusions and references.

Methodology

The methodological development has two implicit phases: the first one, through cabinet work comprised the reading and analysis of the published collection as well as the following activities: 1) Consultation of literature that is specialized in tourism and sustainable development; 2) Material complemented by promotional literature and research; 3) Search in different electronic libraries and statistical databases of the National Population Council and the National Institute of Geographic Statistics and Informatics, for example, the topographic chart of Acapulco E14C47 of 2005 in scale 1:50 000 of the National Institute of Statistics, Geography and Informatics (INEGI) and 4) Drafting of the text.

The second phase comprised field work that was carried out in September 2020, August 2021 and September 2022, where we had the opportunity to take photographs and observe *in situ*. The essay was carried out from a mixed geographical approach since it included the use of qualitative and quantitative techniques in an analytical and cross-sectional manner with emphasis on Tierra Colorada, Guerrero, Mexico.

Theoretical framework

The theory on which the research work is based is Morin's complexity, where he states that in order to find a solution to the problem it is through the analysis of various social, economic and environmental factors (Morin, 1991). The method of the work was based on the approach of the geography of tourism, through which it is possible to carry out an integral analysis of the elements of nature and their linkage with local socioeconomic indicators (Niño-Gutiérrez, 2021).

The approach to the geographies of tourism involves global phases: the first includes the literature and selection of printed and digital materials on tourism in the municipality of Juan R. Escudero, in addition to the search for statistical population information on the municipal capital known as Tierra Colorada, and the second phase that has to do with the analysis of documentary and statistical socioeconomic information that provides a greater dissemination of the characteristics of local nature.

The natural area where El Zapotal Restaurant-Spa is located boasts important attributes for planned ecotourism enjoyment, such as: Excellent climate, almost flat soils (SPP, 1981), diverse bodies of water, exuberant vegetation and abundant fauna that can be seen day and night. There are also excellent access routes, by land from Mexico City to the north and from the port of Acapulco to the south via the highway known as El Sol. Escudero (Figure 1). The town is located at an altitude of 100 meters above sea level, with a tropical climate and summer rains. The heaviest rainfall occurs in May and November, seasons in which there are even cyclones. All of this favors various agricultural activities in the rural zone of Omitlán, as well as in neighboring communities.

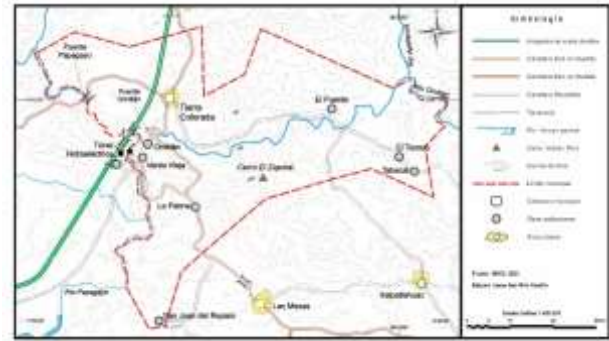


Figure 1. Geographical location
Source: INEGI, 2021

Conceptual framework

Sustainable tourism is the economic activity developed by the local population where the three pillars of sustainable development are addressed, which are: environmental, economic and social. In such a way that, the tourist exploitation lasts in space (Niño-Gutiérrez, 2018).

With sustainable tourism it is feasible to put into practice the Sustainable Development Goals approved at the Earth Summit held in Rio de Janeiro in 1992. This refers to the need for tourism to: i) ensure environmental protection; ii) contribute to the protection and conservation of planetary biodiversity; iii) ensure that local communities preserve their cultural heritage and values; and iv) to the extent possible, provide economic benefits to all stakeholders to reduce the number of people living in extreme poverty (UNDP-SEMARNAT-CONANP, 2013).

Tourism in general is an activity that combines several elements such as: information, actions and performances of the travel industry, indicators for economic development that serve as tools for government decision-making with data that support the proper use of tourism resources available at a given time and destination (Guerrero and Ramos, 2011).

The visitor (UNWTO, 2015), can go to El Zapotal Restaurant-Spa with the intention of enjoying the elements of nature (water-soil-vegetation), but in order to be considered as such, he/she must carry out a recreational activity of "public use" with the support of the existing infrastructure or equipment in the chosen destination, even if it is a totally contemplative activity related to the recreational and gastronomic space of El Zapotal Restaurant-Spa.

According to the above, the administration of El Zapotal Restaurant-Spa has classified visitors for statistical purposes into 40%, with individual visitors, the general public and organized groups, especially schoolchildren (Molina, 2007). The term "visitor" refers to the foreigner or resident who comes to the area of influence of El Zapotal Restaurant-Balneario (Contreras and Medina, 2021).

Tourists who visit El Zapotal Restaurant-Spa and stay at least one night in collective or private lodging. Residents are those people who live in the area of the restaurant and are potential recipients of the supply of tourist facilities, activities, services or providers of these. The local rural population considered as marginalized due to social backwardness and deficiencies in the components of the house-housing in general, refers to the residents of the Restaurant-Spa El Zapotal and is influenced by the tourist management developed by the owners of this recreational and gastronomic place (Fernando González Bernáldez Foundation, 2005).

Tourism-environmental management refers to the activities of restoration, monitoring and control of human activities in a given geographic space (Ceballos, 2006). Environmental management involves proper management of municipal solid waste (garbage) and reducing water consumption from the Cerro el Zapotal water table. The sustainable tourism management policy includes a commitment to comply with the guiding principles of current Mexican environmental legislation (LGEEPA, 1991) and communication to all people at the local and regional levels so that it is available to the general public.

Management must be permanently linked to owners, tourists, visitors, employees, municipal authorities and non-governmental organizations, in order to overcome the three stages of environmental tourism management: i) retrospective phase from 2000 to 2010; ii) reactive phase 2011 to 2020; and iii) active phase 2021 to 2030, where changes will be carried out among the various groups involved and mentioned above in order to design and implement appropriate strategies to build the current and immediate future scenario (SEMARNAP, 1996).

For the responsible management of a tourist destination such as the case under study, citizen participation is a key element. It is necessary to motivate the members of the Omitlán community to interact with national and foreign tourists so that they are incorporated into the development of the local landscape. It is only with effective participation (wanting+knowing+power) that actions can be undertaken that lead to true local development and not only of a sector of the private tourism business (Susano García, 2017).

In the study area, the participation of farmers, ejidatarios and communal farmers who can participate as operational personnel in the administration and management of the El Zapotal Restaurant-Spa is urgent. In order that, with the passage of time, it becomes a tourist case of social inclusion. Where the geographical location, its history, quiet rural landscapes, excellent climate, atmosphere, abundant wildlife and variety of nearby attractions, make the tourist potential of El Zapotal Restaurant-Spa a distinguished place (Facebook, 2021).

Ecotourism is understood as tourism where people (tourists) have contact with nature and their environment for their own use and enjoyment. Also, its practitioners have a high degree of ecological awareness and sustainability criteria, i.e., it pursues the purpose that ecological support prevails in the various social activities (Crespi and Planells, 2011).

Results

The main use of the Omitlán River is mainly for water catchment and even irrigation of rainfed crops, fishing for self-consumption and domestic use in accordance with the hydrological division of Mexico that places Guerrero as part of the Hydrological Regions RH18 (Balsas), RH19 (Costa Grande) and RH20 (Costa Chica-Río Verde) (CONAGUA, 2021). The climates for the municipality of Juan R. Escudero are: warm sub-humid with summer rains (Vidal, 2005), but the predominant climate where El Zapotal Restaurant-Spa is located is warm sub-humid with summer rains (Figure 2).

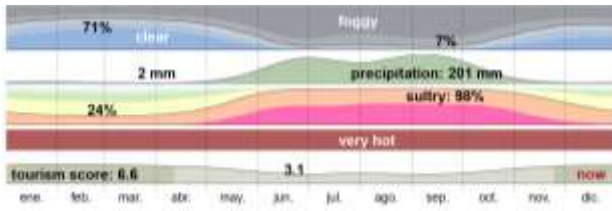


Figure 2 Tierra Colorada's climate
Source: Weather Spark, 2021

The best time of year for outdoor tourism activities is from late November to April 31 (DATAMéxico, 2020). The annual and monthly temperatures recorded for the period 1981-2010 are shown in Table 1. The hottest months are April and May; in contrast, the coldest months are December and January.

Station	Period	Normal maximum temperature	Normal average temperature	Normal minimum temperature
Land 00012039	1981-2010	33.4	25.9	18.5

Table 1 Annual temperature (°C)
Source: SMN-National Meteorological Service, climatological normals, period 1981-2010

The average annual precipitation is 1,400 mm, while the dry season occurs between February and April (Table 2).

Station	Period	Maximum normal precipitation	Minimum normal precipitation
Land 00012039	1981-2010	334.4	2.8

Table 2 Maximum and Minimum Precipitation (mm)
Source: SMN-National Meteorological Service, climatological normals period 1981-2010

In terms of socioeconomic characteristics, we can summarize that, for agriculture, beans, corn, sesame, hibiscus, rice, lime, coconut, vegetables such as watermelon, tomato, Chinese and Creole melon, among others, are grown. Livestock includes cattle, goats, sheep, pigs, horses, asses, mules, poultry and beehives. Hunting is subsistence and includes chalaca, iguana, rabbit, armadillo, squirrels, pigeons, among others (Gutiérrez-Santillán and Ruiz-Gutiérrez, 2019).

Traditional fishing is done on a canoe or directly on foot in the river. Fishing for prawns (Chacal) is carried out by means of hook, atarraya or nazas (Peña-Almaráz *et al.*, 2022). There are numerous bird species such as *Quiscalus mexicanus* (zanate), *Crotophaga sulcirostris* (picuyo) and *Myiozetetes similis* (luis); *Coragyps attratus* (zopilote).

The conditions of the natural landscape influence the wildlife, distribution, fixation and development of diverse activities by human groups. In the year 2020, the total population of the municipality of Juan R. Escudero was 26 093 people; 7 148 homes; 7.4 grades of schooling on average and 316 people who speak an indigenous language. Meanwhile, the municipal seat of Tierra Colorada had 21 311 people; 11 410 dwellings (México en cifras, 2021).

The town of Omitlán, meanwhile, had a total population of 1 033 people; 516 dwellings (INEGI, 2020). Where tourism is supported by sufficient infrastructure and equipment in the cases of the archaeological zone Tehuacalco, Zoocarry and Restaurant-Spa El Zapotal. There is a health center that treats dengue, chikungunya and zika diseases during the rainy season because the pools with murky, foul-smelling water are sites that favor the development and reproduction of insects that transfer these diseases to the inhabitants through bites.

Communications and transportation from the study area to the municipal capital are by federal highway (number 95) using pickup trucks and trucks that leave every hour from one place to another. Education is linked to recreation (Ávila Romero *et al.*, 2016). It is important to promote historical and geotourism knowledge in the study area and municipality. In terms of education, the Secretariat of Education Guerrero (SEG) has a great lag in relation to the advances obtained at the national level and Omitlán is a true reflection of this situation. The illiteracy rate is high among the adult population. The health situation in this town is unfavorable (INEGI, 2020).

The Zoocarry is located in Tierra Colorada, Guerrero, just 100 meters from the entrance to the archaeological zone of Tehuacalco, on the Acapulco-Mexico federal highway. Open to the public from Monday to Sunday from 9:00 am to 8:00 pm. Infrastructure and equipment includes: restaurant, exclusive bar area, gotcha, swimming pool, cabin style rooms (double, king size and VIP) and free camping area.

In all these sites that complement the area of influence of the Restaurant-Spa El Zapotal, it is urgent to conceptualize tourism within the transversality as a priority strategic activity that generates sustainable development at a local level, but with regional influence, to mitigate poverty, inequality, inequity and in the long term build a prosperous society with the help of all those directly or indirectly involved in the tourism industry.

The practice of tourism in the surroundings of the Restaurant-Balneario El Zapotal is supported by the following attributes: Beauty of the tropical jungle vegetation, which serves as a refuge for local wild birds Pato buzo (*Phalacrocorax brasilianus*), Garza blanca (*Ardea alba*), Garza tigre (*Tigrisoma mexicanum*), Luis bienteveo (*Pitangus sulphuratus*), Cerceta cejas blancas (*Spatula querquedula*), Colibríes (*Familia Trochilidae*), Paloma blanca (*Columba livia*), Paloma morada (*Patagioenas flavirostris*), Paloma andapie (*Leptotila verreauxi*) and Codorniz (*Coturnix coturnix*), although there are also migratory birds such as the Canadian duck and the local pigeon (Araujo, 2003).

Charales (*Familia Atherinopsidae*), blanquillos (*Familia Malacanthidae*), guabina (*Lebiasina bimaculata*), camarón (*Suborden Dendrobranchiata*) chacal (*Macrobrachium tenellum*), popoyote (*Profundulus hildebrandi*), mojarra (*Diplodus vulgaris*), carpas, chancletas, robalos y charras negras. In addition, there are some batrachians: frogs, toads, slugs, water snakes, and tequereque (*Ibidem*, 2003).

Among the dominant primary economic activities in the study area are agriculture and cattle ranching, but as a complement, people also earn their income from new constructions where tourism services are offered (Tehuacalco archeological zone), which is a plus for people who see tourism as another opportunity for family income.

Rural natural landscapes such as the El Zapotal Restaurant-Spa, Poza la Pinta and Zoocarry provide identity and roots in the collective memory of the citizens who live in the towns and rural communities surrounding the study area.

It is true that it is difficult to achieve sustainable development in a free market economy (Segrelles, 2013), but it is also fortunate that the population itself introduces elements that raise their standard of living, which represents an opportunity for sustainability since it is an example of the economic viability of agriculture, livestock, hunting and fishing, and tourism contributes to environmental integrity, the preservation of ecosystems, the conservation of nature and biodiversity.

The territory comprising the El Zapotal Restaurant-Spa along with the elements of nature (climate, vegetation, water, soil and landscape) make agriculture possible in Tierra Colorada (Flores-Sánchez, *et al.*, 2022). Ornithological tourism comprising bird watching and ecotourism are two viable resident-driven activities (Nova Muñoz *et al.*, 2011).

El Zapotal Restaurant-Spa and its surroundings are productive spaces with high potential for the management of well-organized tourism whose purposes are: a) to give continuity to agricultural activities and b) to propose a specific program that contributes to local development. El Zapotal Restaurant-Spa is a recreational site with incipient tourism management. It is of great ecological and economic interest because the nearby bodies of water include: the Papagayo River, waterfalls such as Poza la Pinta and the General Ambrosio Figueroa Hydroelectric Dam (La Venta).

El Zapotal Restaurant-Spa located in Juan R. Escudero has as neighboring communities: La Venta, Puente Omitlán, Villa Omitlán and Nuevo Omitlán. These towns and villages are located on ejido, communal, private and, to a lesser degree, federal lands. The area under study has the nature of interrelating natural resources with agricultural activity, which is positive for the tourist experience of those who frequently visit this study area for gastronomic purposes. This zone serves as a multifunctional site since it is possible to carry out agricultural activities, hunting, fishing, and bird watching.

The landscape surrounding the study area represents an opportunity for local tourism, as it allows for a virtuous circuit by maintaining the ecological balance in the surrounding areas of Tierra Colorada. El Zapotal Restaurant-Spa and its area of influence present adequate characteristics for tourism use and management, even under difficult conditions such as the COVID-19 pandemic.

The basis of tourism management is carried out through a tourism unit that guarantees the conservation of the natural landscape and maintenance of the existing tourism infrastructure with tourism management through the use of anti-bacterial gel. The goal is the protection, conservation and recovery of the natural environment where thanks to tourism management the livelihood for the local social capital is fixed (Niño-Gutiérrez, 2021). Tourism is an activity that brings with it a high use of land near coastal areas. In such a way that, by the end of 2022, the territory of the coastline is a system that boasts transformation of the tourism industry due to the effect of COVID-19 and for that reason a growth in the real estate business (second home, Niño *et al.*, 2020).

Since 2015 in the case of El Zapotal Restaurant-Spa has been complemented with gastronomy (typical iguana dish), tranquility in the rural area, hiking, waterfall, rivers and even cultural tourism such as the city of Chilpancingo, Taxco de Alarcón, La Venta, Puente Omitlán, Villa Guerrero, Las Palmas, San Antonio, Chilpancingo de los Bravo and buses with passengers from Mexico City. This local project promotes the rooting of the population to the rural landscape, since employment can be obtained in the community, municipality or region. With this type of concrete actions, people will be able to create a virtuous circuit in their family's economic income that will contribute to improving their standard of living.

El Zapotal Restaurant-Spa focuses its local competitiveness on the observation of flora-fauna and the presence of fish fauna, such as Jackal Shrimp, Blanquillo, Popoyote, etcetera. According to tourism management in Mexico, in the first place, we have the most general public policy for the planning of the natural area in the study.

According to the Mexican Environmental Legislation, the natural resources program must be in accordance with the Master Plan of the El Zapotal Restaurant-Spa Management Unit, where the strategic objective, goals and actions of strategic tourism planning are set out.

Public use includes the set of recreational, social, educational and cultural activities that visitors and tourists generally carry out in the study area as they get to know, enjoy and support at the regional level. This approach by citizens and tourists guarantees the conservation of the environment in the local ecological balance and the dissemination of conservationist values of the landscape in the medium term. The programs that make up the Public Use Plan in the El Zapotal Restaurant-Spa are: a) carrying capacity; b) management and direction; c) environmental education; d) research; e) participation; f) training; g) quality; h) safety; i) monitoring and evaluation; and j) economic (Melo and Niño, 2003).

Therefore, awareness must be raised among all stakeholders in the tourism sector to understand that sustainable tourism management can only be achieved with everyone's participation. But, for this, it is essential the formation and work of a multidisciplinary team of academics, public sector, private initiative, non-governmental organizations and the rest of the communities to design successful tourism management strategies to achieve the desired sustainable development.

Contributions

The proposal for tourism management of El Zapotal Restaurant-Spa includes a public use program that reconciles three essential elements: 1) The natural attraction represented by the landscape of Selva Baja Caducifolia and 2) Participation of tourists and visitors in recreational and sports activities.

It is suggested to plan the intense and active recreation in the area of the spa where the slope of the land is five degrees, tropical climate, sub-humid, with rains in the summer and grassland soil. They comprise landscapes scarcely modified, in addition they harbor enough scenic attractions, vegetal cover and smooth reliefs. Large visitor groups are accepted there (Niño-Gutiérrez *et al.*, 2015).

The objective in the spa area is to achieve a combination of passive observation and activities that harmonize with the scenic beauty of the landscape, dense and controlled groups of visitors are tolerated, so it is essential to propose ecotourism activities that promote environmental education of an active or passive nature. Tourist services at the El Zapotal Restaurant-Spa consist of rustic infrastructure for picnics, picnics, and food and beverage sales. What is interesting in the study area is that it maintains the morphology of the site (Figure 2), protects the natural beauty, the owners contribute to the improvement of the area and promote the place as a tourist-recreational site, which is highly positive and even for its workers, since they obtain income for their families, which contributes to local development.

The ecotourism subprogram is a nodal point in the planned management of local ecotourism. The ecotourism use of water-soil-vegetation in the El Zapotal Restaurant-Spa is guided by the conservationist concept that the owners carry out in time and space of this geographic enclave. When the COVID-19 epidemiological traffic light is green, the study area is open to the public.

Tourism is at the core of El Zapotal Restaurant-Spa and to be in line with the digital demand for these services, the study area is on the social network Facebook and other social networks. Hence, this research proposes a tourism subprogram that takes up the existing infrastructure to ensure the success and impact on various people from other urban centers such as the cities of Acapulco, Chilpancingo, Taxco and Mexico City, which have excellent land communication routes that facilitate access to tourism at all times.

Conclusions

The El Zapotal Restaurant-Spa and its area of influence, by virtue of being based on the methodological development of the Geography of tourism, a discipline that enriches the planning of rural areas such as this case. In terms of the spatial dimension, the study contributes to the tourism management of a particular area. Also, the study contributes to the proposal of a public use program and its respective subprograms in order to minimize as much as possible negative impacts on the landscape.

The ecotourism use of the El Zapotal Restaurant-Spa is primarily through the landscape resources, which are directly linked to the family income of the people involved in this activity; the contributions of this research lie in its propositional character for the sustainable use of the resources: landscape and water, where the public use program is fundamental for the practice of ecotourism, whose landscape values and attractions are capable of maintaining and increasing the influx of visitors, tourists and residents.

The existence of focal and complementary gastronomic and recreational attractions such as the archaeological zone of Tehuacalco, Zoocarry and Poza Pinta together with the application of public use subprograms can generate the permanence of the natural landscape, diversification of employment sources for ejidatarios and community members, increased income from ecotourism activities and consequently an improvement in the local economy of those who participate in the area under study. As for the methodology used, it allowed a glimpse of the tourism potential and management of the El Zapotal Restaurant-Spa, Tierra Colorada, Guerrero, where the public use program and the proposal of seven subprograms for tourism management in the near future of the area under study were outlined.

Suggestions

As a result of the good access to El Zapotal Restaurant-Spa: i) develop a public use program focused on environmental education, due to the significant demand of visitors from elementary school children, as well as organized groups of higher education and families, given its proximity to Acapulco de Juarez, Chilpancingo de los Bravos and Buenavista.

1. Strengthen and intensify the regional tourism dynamics, so that the study area is increasingly visited by a growing number of visitors who come motivated by the attractiveness of natural resources: climate, water, soil, vegetation, fauna, etc., which are the basis of the public use activities that are developed: walking, hiking, passive observation of the scenic beauty, as well as active recreation as an attraction: hiking, camping, mountain biking and horseback riding.

2. Promote the regional influence of El Zapotal Restaurant-Spa since the recreational activities it offers are complemented by neighboring natural attractions such as Poza Pinta, El Zoocarry and the Tehuacalco archaeological zone; and iv) Plan low-impact activities in the area of influence of El Zapotal Restaurant-Spa such as hiking, detected as the main vocation of public use of the study area. At least two trails could be designed to maintain the traditional function of contemplation, observation, sighting, and physical and emotional events for visitors. In addition to conserving the network of roads and primary ways of terrestrial communication, for example: the dirt roads and cobblestones that intercommunicate people with the natural landscapes mentioned above (Zoocarry, Poza Pinta, and Tehuacalco Archeological Zone).

References

- Araujo, J. E. (2003). *Fauna silvestre del Estado de Guerrero*. México: Guerrero. Cultural Siglo XXI.
- Ávila Romero, L. E.; Betancourt Posada, A.; Arias Hernández, G. y Ávila Romero, A. (2016). Vinculación comunitaria y diálogo de saberes en la educación superior intercultural en México. *RMIE* 21(70): 759-783. <https://www.scielo.org.mx/pdf/rmie/v21n70/1405-6666-rmie-21-70-00759.pdf>
- Balanta, V. J.; López, L. y García, D. A. (2022). Análisis de los factores socioeconómicos de la agricultura familiar campesina de subsistencia en el agroturismo. *Face* 22(1): 198-227. <https://ojs.unipamplona.edu.co/ojsviceinves/index.php/face/article/view/1488/1615>
- Ceballos, C. (2006). *Análisis de la política ambiental*. México: Plaza y Valdés.
- Crespi, M. & Planells, M. (2011). *Destinos turísticos*. Madrid: Síntesis.
- CONAGUA (2021). *Regiones hidrológicas de la República Mexicana*. <https://sina.conagua.gob.mx/sina/index.php?p=32>
- Contreras, D. J. y Medina, F. J. (2021). Turismo gastronómico, productos agroalimentarios típicos y denominaciones de origen. Posibilidades y expectativas de desarrollo en México. *Journal of Tourism and Heritage Research*. 4(1): 343-363. <https://www.jthr.es/index.php/journal/article/view/260>
- DATAMéxico (2020). *Juan R. Escudero*. <https://datamexico.org/es/profile/geo/juan-r-escudero#economic-indicators>
- Facebook (2021). *Página WEB del Restaurante-Balneario El Zapotal*. <https://www.facebook.com/Restaurant-y-Balneario-EL-Zapotal>
- Flores-Sánchez, D.; Hernández Ruiz, A.; Navarro-Garza, H.; Vázquez-García, V. y Vibrans, H. (2022). Plantas silvestres en la alimentación de familias campesinas en Tecoaapa, Guerrero. *Agricultura, Sociedad y Desarrollo*. <https://doi.org/10.22231/asyd.v192.1289>
- Fundación Fernando González Bernáldez (2005). *Manual sobre conceptos de uso público en los Espacios Naturales Protegidos del Estado español*. Serie Manuales EURO-PARC-España. Madrid.
- Gobierno del Estado de Guerrero-INEGI (2017). *Anuario estadístico y geográfico de Guerrero*. http://www.datatur.sectur.gob.mx/ITxEF_Docs/GRO_ANUARIO_PDF.pdf
- Google Earth (2021). *Ubicación geográfica del Restaurante-Balneario El Zapotal*. <https://www.google.com/intl/es-419/earth/>
- Guerrero, P. & Ramos, J. (2011). *Introducción al turismo*. México: Patria.
- Gutiérrez-Santillán, T. V. y Ruiz-Gutiérrez, F. (2019). La connotación cultural sobre algunos carnívoros mexicanos. *Árido-Ciencia*. 6(1): 18-35. <https://docplayer.es/146016921-La-connotacion-cultural-sobre-algunos-carnivoros-mexicanos.html>
- Guma, S. (2022). Turismo de proximidad y responsabilidad social empresarial en contexto de crisis sanitaria. *HERMENEUTIC I*(21): 172-178. <https://publicaciones.unpa.edu.ar/index.php/1/article/view/866/899>

- INAFED (2020). *Enciclopedia de los municipios y delegaciones de México*. <http://www.inafed.gob.mx/work/enciclopedia/EMM12guerrero/municipios/12039a.html>
- INEGI (2021). *México en cifras del municipio Juan R. Escudero*. <https://www.inegi.org.mx/app/areasgeograficas/>
- INEGI (2020). *Cuaderno Estadístico del Municipio Juan R. Escudero*. Ciudad de México.
- INEGI (2005). *Hoja Topográfica Acapulco E14C57*. Escala: 1: 50 000. Ciudad de México.
- INEGI (1998). *Anuario estadístico del Estado de Guerrero*. http://internet.contenidos.inegi.org.mx/contenidos/productos/prod_serv/contenidos/espanol/bviniegi/productos/historicos/1290/702825155971/702825155971_1.pdf
- LGEEPA (1991). *Ley General del Equilibrio Ecológico y la Protección al Ambiente*. México: Editorial Porrúa.
- Melo, C. y Niño-Gutiérrez, N. S. (2003). Ordenamiento territorial y potencial ecoturístico del Ejido San Juan de las Huertas, Estado de México. *Regiones y Desarrollo Sustentable*. 1(5): 195-234.
- México en cifras (2021). *Información geográfica y socioeconómica del municipio Juan R. Escudero, Guerrero*. <https://www.inegi.org.mx/app/areasgeograficas>
- Molina, S. (2007). *Fundamentos del nuevo turismo. De la fase industrial a la fase de innovación*. Ciudad de México: Trillas.
- Morín, E. (1991). *Introducción al pensamiento complejo*. http://www.trabajosocial.unlp.edu.ar/uploads/docs/morin_introduccion_al_pensamiento_complejo.pdf
- Niño-Gutiérrez, N. S. (2021). Socioformación y distribución espacial del COVID-19 en Guerrero, México en el primer semestre del 2020. En Luna-Nemecio, J. & Tobón, S. (Coords). *COVID-19: Retos y oportunidades para la socioformación y el desarrollo social sostenible* (pp. 201-220). CDMX: Universidad Pablo de Olavide-CICSAHL-Kresearch.
- Niño, J.; Niño, I. y Niño, N. (2020). Viviendas de segunda residencia: entre la vulnerabilidad y el riesgo. *Foro de Estudios sobre Guerrero*. 5(6): 434-443. https://www.researchgate.net/publication/349108344_Viviendas_de_segunda_residencia_entre_la_vulnerabilidad_y_el_riesgo
- Niño-Gutiérrez, N. S. (2018). Sustainable Tourism at “El Hondo” Natural Park, Spain. *Revista Espacios*. 39(18): 1-5. <https://www.revistaespacios.com/a18v39n18/a18v39n18p09.pdf>
- Niño-Gutiérrez, N. S.; Segrelles Serrano; J. A.; Niño-Castillo, I. N. & Niño-Castillo, J. E. (2015). Multifuncionalidad y turismo en el Parque Natural “El Hondo” de la comunidad valencia. *El Periplo Sustentable*. 1(29): 34-56. <https://www.redalyc.org/journal/1934/193440418009/html/>
- Nova Muñoz, O.; Almazán-Núñez, R. C.; Bahena-Toribio, R.; Cruz-Palacios, M. T. y Puebla-Olivares, F. (2011). Riqueza y abundancia de aves de la subcuenca de Tuxpan, Guerrero, México. *Universidad y Ciencia*. 27(3): 299-311. <https://www.scielo.org.mx/pdf/uc/v27n3/v27n3a5.pdf>
- OMT (2015). *Definición del Desarrollo Sostenible*. <https://www.unwto.org/es/desarrollo-sostenible>
- Peña-Almaraz, O. A., Vega-Villasante, F.; Vargas-Ceballos, M. A.; Guerrero-Galván, S. R. y Espinosa-Magaña, A. F. (2022). El chacal en el río: la travesía de su vida. *LUCIDUM CIENCIA*. 1(1): 26-32. <http://www.cuc.udg.mx/es/revista-lucidum-ciencia>
- PNUD-SEMARNAT-CONANP (2013), *Turismo de humedales una gran experiencia. El turismo responsable apoya los humedales y la gente*. México: s. e.
- Segrelles, J. (2013). Conservación ambiental y aprovechamiento agropecuario el caso del Parque Natural Agrario “Los Carrizales (Elche, Alicante)”. *Boletín de la Asociación de Geógrafos Españoles*. 62(1): 295-316. <https://dialnet.unirioja.es/servlet/articulo?codigo=4258375>

SEMARNAP (1996). *Decreto que reforma, adiciona y deroga diversas disposiciones de la Ley General del Equilibrio Ecológico y la Protección al Ambiente*. Ciudad de México.

SMN (2011). *Información meteorológica del municipio Juan R. Escudero*.
<https://smn.conagua.gob.mx/es/climatologia/informacion-climatologica/normales-climatologicas-por-estado?estado=gro>

SPP (1981). *Carta edafológica Acapulco E14-11*. Escala 1: 250 000. Ciudad de México.

Susano García, J. L. (2017). El turismo, una alternativa para el desarrollo económico de la ciudad de Chilpancingo, Guerrero, México. *Tlamati*. 8(2): 56-60.
http://tlamati.uagro.mx/images/Archivos/Tlamati_Vol_8_2017/Susano-Garcia_2017.pdf

UICN-PNUMA-WWF (1980). *Estrategia mundial para la conservación. La conservación de los recursos vivos para el logro de un desarrollo sostenido*. España.

Vidal, R. (2005). *Las regiones climáticas de México*. Ciudad de México: Instituto de Geografía, UNAM.

Weather Spark (2021). *El clima y el tiempo promedio en todo el año en Tierra Colorada, Guerrero, México*.
<https://es.weatherspark.com/y/5364/Clima-promedio-en-Tierra-Colorada-M%C3%A9xico-durante-todo-el-a%C3%B1o#Sections-BestTim>