



University of  
Massachusetts  
Amherst

## Participatory Low-impact Tourism Strategy as a way of achieving Sustainability. Samalayuca Dunes (Mexico)

Item Type	event;event
Authors	González Herrera, Manuel Ramon;Suarez, Rosa Herminia;Casimiro, Karina H
Download date	2026-03-06 08:59:11
Link to Item	<a href="https://hdl.handle.net/20.500.14394/49345">https://hdl.handle.net/20.500.14394/49345</a>

**TTRA 2021 Extended Abstract Template:**  
**Participatory Low-impact Tourism Strategy as a way of achieving Sustainability.**  
**Samalayuca Dunes (Mexico)**

## **Introduction**

Tourism is an important activity for achieving sustainable development, especially in Protected Natural Areas (PNAs) where it is necessary to promote the conservation of natural and cultural heritage. Taking into consideration this premise, the objective of this study is to potentiate a low-impact tourism model with the participation of the local community in the Samalayuca Dunes, Mexico, as a way of achieving sustainability for a New Tourism Era.

For this purpose, a participatory tourism strategy was built with community stakeholders, specifically neighboring communities, based on three pillars: conservation of natural and cultural heritage; socioeconomic community development; and reduction of environmental impacts. The proposal is based on the “Strategic Framework for Sustainable Tourism in PNAs with a perspective to 2030” and the “Management Instruments in PNAs for tourism use”, such as the Management Program, Public Use Program, Tourism Carrying Capacity, and Limits of Acceptable Change. All of these offer opportunities for the management of visitors and the proposal of tourism initiatives based on good practice, which will benefit local inhabitants.

## **Literature Review**

This research uses the definition of sustainable development contained in the Mexican legislation, which is accepted as an evaluable process through criteria and indicators of an environmental, economic and social nature, which tends to improve quality of life and productivity, based on the preservation of ecological balance, environmental protection and the use of natural resources (LGEEPA, 2018). According to the General Tourism Law, sustainable tourism allows optimal use of natural resources suitable for tourism, helping to conserve them; respects the sociocultural authenticity of the host communities, preserving their cultural, traditional and architectural values; and ensures economic activities that improve living conditions, offering benefits such as employment, income and other social services (LGT, 2019). Its implementation will allow the maximization of benefits for the community and the minimization of negative impacts, thus promoting community social development, recognizing that tourism should not negatively affect the quality of life of the community, but rather maximize benefits for cultural heritage, and support the adoption of behavior codes.

To understand the concept of sustainable tourism as a paradigm of development, different models and theoretical approaches have been presented, which can be postulated to improve comprehension of the contribution of tourism for achieving the Sustainable Development Goals (SDGs). Among the selected models for the present study are: The Three “Ps” Model of Sustainability: People, Planet, Profit; The Triple Bottom Line Model: Economic, Social, Environmental; and The Circle of Sustainability Model: Economics, Ecology, Politics, Culture

(Slaper & Hall, 2011; University of Wisconsin, n.d; Thatcher, 2014). The conceptual and methodological triangulation of these models is useful for clearly visualizing this study's objective, since they are based on a holistic conceptualization of development, and provide the basis for the incorporation of an integrative approach and a preventive management of impacts.

For achieving sustainability in PNAs it is necessary to introduce the concept of low-impact environmental tourism. The definition of the National Commission for PNAs in Mexico (CONANP) was used, which defines it as an environmentally responsible tourism modality, consisting of traveling or visiting relatively undisturbed natural spaces, in order to enjoy, appreciate and study their natural attractions, as well as any cultural manifestation of the present and the past, through a process that promotes conservation, has low environmental and cultural impact, and induces an active and socio-economically beneficial involvement of local populations (CONANP, 2013).

The Strategic Framework for Sustainable Tourism in PNAs (CONANP, 2018) allows the identification of the necessary components for the use of tourism and the minimum conditions of sustainability, generating a baseline of strategic information that facilitates decision-making. It recommends, among the management instruments for the management and ordering of tourist use, the Management Program (CONANP, 2018:30); the Public Use Program (CONANP, 2018:31); the Study of Tourism Carrying Capacity (CONANP, 2018:31); and the Study of the Limit of Acceptable Change (CONANP, 2018:31). It also proposes mechanisms for the prevention and control of impacts, such as regulations for visitor management and the development of tourism initiatives based on better practices, for the benefit of local inhabitants inside and in the influence areas of the PNAs.

In this context, the integration of communities into tourism development is a basic requirement for participatory sustainability management (Clausen & Gyimóthy, 2016; Grybovych, 2012; Bridgewater & Rotherham 2019). This approach is particularly necessary when the interests of the parties involved are opposed in the space-time dimension; primarily in cases where the expectations of tourists, the community and the context are not convergent (Crosby, 2015; Wang, *et al.*, 2014; Ming-Lang, *et al.*, 2019). It is advisable to favor the convergence of interests and expectations among the interested parties (Silva, Agapito & Pinto, 2017), so that positive memorable experiences are promoted (Crosby, 2015). The participation of all the actors involved at the local level constitutes an appropriate framework to potentiate the required synergies (Grybovych, 2012), including individuals, groups, public and private institutions, programs, services and businesses (Rodríguez, 2015; Guccio, *et al.*, 2017).

Searching for alternatives to traditional models, locally-based tourism (LBT) arises "(...) as a strategy to promote development and environmental conservation for the sake of sustainable tourism; implies an organizational model of the activity focused on local control over the planning, management and benefits of tourism (...), associated with this local control, different notions of community being implicit and becoming part of the LBT" (Ruiz-Ballesteros, 2015:19). It is recommended that various concepts "such as community-based tourism, community ecotourism, and rural community tourism could be framed within the broader concept of LBT" (Ruiz-Ballesteros, 2015:20), an approach used in this study, since it takes the local community as the main agent (Ruiz-Ballesteros, 2015:21), which is why the "main particularity of the LBT is its contribution to local development" (Ruiz-Ballesteros, 2015:40-41).

LBT is a sustainable option for economic and social development, together with a balanced distribution of benefits at the local level (Hamilton & Alexander, 2013; Perona & Molina, 2016). This approach is understood as "a sustainable alternative to mass tourism, which has commercialized territories, displaced human populations and has transformed their spaces and living conditions" (Palomino, Zamora & López, 2016:6). According to Palomino and colleagues (2016:8), the LBT "proposes a different use of the territory and its resources, both by those who provide the service and by users, as it involves valuation practices *in situ*, the recognition of cultural heritage of the communities and their interaction with them".

Therefore, it is necessary to promote active and integrated community participation in planning and decision-making processes from the local level (Gucio, *et al*, 2017; Pulido-Fernández & Pulido-Fernández, 2017). Regarding tourism planning and management, Monterrubio (2009) introduces an important consideration by noting the relationship between tourism and the community dimension through community participation. The community tradition refers to the degree of participation exercised by the community when carrying out planning (Grybovych, 2012); this tradition suggests that the benefits provided by tourism favor the community. Of course, these communities will also be responsible for tourism planning and monitoring the projects, programs or plans (Monterrubio, 2009).

## **Methodology**

A methodology based on the principles of participatory strategic planning was used, in which empirical, theoretical and statistical mathematical methods were implemented. The strategic diagnostic phase (internal and external analysis) included the review of institutional and regulatory indicators; projects, promotion, and marketing; management activities; business models; visitor awareness; and conservation culture, as well as the study of perceptions of the desired tourism development model based on which focus groups, surveys, and interviews were developed. In the strategic projection phase (solutions) the study of tourism potential (inventory table and evaluation of attractions) was carried out, in addition to carrying capacity determination, a functional zoning proposal based on morphological zoning, and the suggestion of work programs, based on which discussion groups, surveys, and interviews were developed.

It concludes by emphasizing the need to sensitize the different stakeholders with the understanding and implementation of the concept of tourism sustainability as a paradigm and development model to achieve the SDGs, recognizing the value of the instruments designed in a participatory manner for Sustainable Tourism Management and the minimization of the impacts generated by tourism. This will allow the promotion of good practice in sustainable tourism, the chance to opt for sustainability certification, the generation of information and knowledge, and the chance to take advantage of financing and development opportunities for sustainable tourism projects

## **Results**

The PNA "Médanos de Samalayuca" is located in northern Mexico within the Chihuahua Desert, considered with the greatest biodiversity in North America. It is represented by a system

of wandering dunes of fine sands composed of silica dioxide, recognized as being of the greatest height in Mexico, so it constitutes one of the most important representations of dunes nationwide and one of the most extraordinary dune areas on the planet. It belongs to the hydrological region “Closed Basins of the North” in arid conditions, without superficial water flows or presence of groundwater, and is characterized by a high rate of endemism, being the habitat for approximately 240 plant species and 150 fauna species. It also contains more than 50 archaeological sites, and is the settlement area of indigenous rural communities. Among the main inherited environmental problems are the extraction of sand, damage to the dunes due to bad practices, illegal logging of mesquites, changes in land use, accumulation of tires and other pollutants, extraction and sale of the desert rose (crystal formation), illegal extraction of native fauna and the introduction of foreign species, as well as the practice of mass tourist activities incompatible with the response conditions of this environmental system.

In response to this problem, a Tourism Development Strategy with local participation was designed for achieving sustainability, integrated by six stages: (1) Perception study on the development model, (2) Situational diagnosis of the Public Use Zone, (3) Potential study of natural and cultural resources for tourism use, (4) Study of tourism carrying capacity, (5) Functional Tourism Zoning with sustainability criteria, and, (6) Design of interpretive ecotourism trails. As outcomes associated with the strategy, a Sustainable Tourism Protocol, Recommendations for the Management Program and Public Use Program, Interpretation and Environmental Education Program, Training Program, and a Code of Conduct of the Responsible Visitor were transferred to the community.

The projected strategies for the adoption of the results correspond to the dissemination of the research findings among the interested public, assuming the commitment to feed back the findings and proposals to the local communities and report the strategies and actions to the local decision-making authorities.

## **Conclusion and Discussion**

The main conclusion was to emphasize the need to sensitize the different community stakeholders to the understanding and implementation of the concept of sustainable tourism as a paradigm and development model for achieving the SDGs, recognizing the value of the instruments implemented in a participatory manner for Sustainable Tourism Management and the minimization of the impacts generated by tourism. This will allow the promotion of better practices of sustainable tourism, the chance to opt for sustainability certification, the generation of information and knowledge, and the chance to take advantage of financing and development opportunities for sustainable tourism projects.

It was found that the contribution of tourism to sustainability in Samalayuca is feasible if the role of local communities continues to be strengthened as part of the planning and management activities of the territory, with integrated criteria of economic growth, protection of the natural-cultural heritage, and social well-being. Such an approach requires a conceptual and operational rethinking of current tourism to enhance compliance with the SDGs by 2030, a horizon towards which a multifunctional, more integrated, planned, and participatory space is projected with the

purpose of promoting a more attractive, experiential and safe offer, which promotes high levels of visitor satisfaction.

The favorable contribution of local participants to the diagnosis and strategic projection of sustainable tourism development was corroborated by the locals; it was based on their knowledge and wishes related to the protection of their natural and cultural spaces, as well as the will to place them in tourism as a way to obtain economic and social benefits.

In the next stages of research, it will be necessary to promote the design of an interpretive trail, a tourist code of responsible behavior, education and environmental interpretation manuals, as well as to favor the application of tourism marketing and commercialization with sustainability criteria. The incorporation of standards of sustainable tourism to the operation and management of tourism and the use of financing opportunities and development of sustainable projects has been recognized by the community stakeholders as decisive for future sustainable development.

## References

- Bridgewater, Peter., & Rotherham, Ian. (2019). A critical perspective on the concept of biocultural diversity and its emerging role in nature and heritage conservation. *British Ecological Society*, 1(3), 291-304. <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1002/pan3.10040>
- Clausen, H-B., & Gyimóthy, S. (2016). Seizing community participation in sustainable development: Pueblos Mágicos of Mexico. *Journal of Cleaner Production*, 111B (2016), 318–326. <https://doi.org/10.1016/j.jclepro.2015.01.084>
- CONANP. (2013). *Programa de Manejo Área de Protección de Flora y Fauna Médanos de Samalayuca*. [https://simec.conanp.gob.mx/pdf\\_libro\\_pm/33\\_libro\\_pm.pdf](https://simec.conanp.gob.mx/pdf_libro_pm/33_libro_pm.pdf)
- CONANP. (2018). *Marco Estratégico de Turismo Sustentable en Áreas Naturales Protegidas de México*. Secretaría de Medio Ambiente y Recursos Naturales. México. Primera edición.
- Crosby, A. (2015). Convergence of interests between tourists, locals and territory. *EFEVERDE*. <http://www.efeverde.com/opinion/convergencia-de-intereses-entre-turistas-locales-y-las-areas-naturales>
- Grybovyh, O. (2012). Designing a qualitative multi-case research study to examine participatory community tourism planning practices. In K. F. Hyde, C. Ryan, & A. G. Woodside Eds.), *Advances in Culture, Tourism and Hospitality Research: Field Guide to Case Study Research in Tourism, Hospitality and Leisure*, 6, 501–520.
- Guccio, C., Lisi, D., Martorana, M., & Mignosa, A. (2017). On the role of cultural participation in tourism destination performance: an assessment using robust conditional efficiency approach. *Journal of Cultural Economics*, 41(2), 129–154. <https://doi-org.libproxy.sdsu.edu/10.1007/s10824-017-9295-z>
- Hamilton, K., & Alexander, M. (2013). Organic community tourism: A co-created approach. *Annals of Tourism Research*, 42(2013), 169–190. <https://doi.org/10.1016/j.annals.2013.01.015>
- Ley General de Turismo. (2019). Nueva Ley publicada en el Diario Oficial de la Federación el 17 de junio de 2009. [http://www.diputados.gob.mx/LeyesBiblio/pdf/LGT\\_310719.pdf](http://www.diputados.gob.mx/LeyesBiblio/pdf/LGT_310719.pdf)

- Ley General del Equilibrio Ecológico y la Protección al Ambiente. (2018). Nueva Ley publicada en el Diario Oficial de la Federación el 28 de enero de 1988. [http://www.diputados.gob.mx/LeyesBiblio/pdf/148\\_050618.pdf](http://www.diputados.gob.mx/LeyesBiblio/pdf/148_050618.pdf)
- Ming-Lang, Tseng., Chunyi, Lin; Chun-Wei Remen Lin., Kuo-Jui Wu., & Thitima, Sriphon. (2019). Ecotourism development in Thailand: Community participation leads to the value of attractions using linguistic preferences. *Journal of Cleaner Production*, 231(10), 1319-1329 <https://www.sciencedirect.com/science/article/abs/pii/S0959652619318414>
- Monterrubio-Cordero, J-C. (2009). Comunidad receptora: Elemento esencial en la gestión turística. *Gestión Turística*, (11) 101-111. <http://www.redalyc.org/articulo.oa?id=223314808005>
- Palomino, B., Zamora, J., & López, G. (2016). Community tourism in the Sierra Norte de Oaxaca: Perspective from institutions and governance in indigenous territories. *The Sustainable Periplo*, 30, 6–37. <http://rperiplo.uaemex.mx>
- Perona, E., & Molina, E. (2016). Evolution and stages of tourism development in the province of Córdoba, Argentina: How far is the sustainable tourism ideal? *Notebooks of Tourism*, 37, 527–530.
- Pulido-Fernández, J-I., & Pulido-Fernández, M-C. (2017). Proposal for an indicators system of tourism governance at tourism destination level. *Social Indicators Research*, 1–49. <https://doi-org.libproxy.sdsu.edu/10.1007/s11205-017-1627-z>
- Rodríguez, M. (2015). The praxis of community social work at the local level: citizenship, participation, empowerment. *AIS, Actions and Social Investigations*, 35, 7-29.
- Ruiz-Ballesteros, Esteban. (2015). Turismo de Base Local y Comunidad, ¿Una Vinculación Oportuna? *Revista Andaluza de Antropología*, 8, 19-44.
- Silva, J-A., Agapito, D., & Pinto, P. (2017). Measuring the quality of destinations. In N. Scott, M. De Martino, & M. Van Niekerk (Eds.), *Bridging Tourism Theory and Practice: Knowledge Transfer to and Within Tourism*, 8, 221–237.
- Slaper, Timothy-F., & Hall, Tanya-J. (2011). The Triple Bottom Line: What Is It and How Does It Work? *IBR*, 86(1). <https://www.ibrc.indiana.edu/ibr/2011/spring/article2.html>
- Thatcher, Andrew. (2014). *Theoretical definitions and models of sustainable development that apply to human factors and ergonomics*. [https://www.researchgate.net/publication/273965629\\_HFSD\\_definition\\_working\\_paper\\_19\\_08\\_2013](https://www.researchgate.net/publication/273965629_HFSD_definition_working_paper_19_08_2013)
- University of Wisconsin. (n.d). *The Triple Bottom Line*. University of Wisconsin Sustainable Management. <https://sustain.wisconsin.edu/sustainability/triple-bottom-line/>
- Wang, S., Zhou, L., Lee, S., & King, C. (2014). Analysis of residents' social identity, tourism engagement, and propensity for tourism advocacy. *Advances in Hospitality and Leisure*, 10, 109–129. DOI: 10.1108/S1745-354220140000010006