

Climate Change Adaptation and Mitigation in the Tourism Sector in Mexico



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Introduction

The objective of this article is to identify the climate change adaptation and mitigation strategies that have been proposed for the tourism sector in Mexico. A literature and documentary review was conducted. The results show that, in the current Special Program on Climate Change (PECC), six strategies have been established, in which the Ministry of Tourism plays an important role. These actions are aimed at developing ecosystem-based adaptation measures, encouraging energy savings in establishments, and promoting regulatory compliance, among others. There are also other measures that benefit the tourism sector and are the responsibility of other agencies. However, the challenge lies in how to implement them.

Climate Change in Mexico

Mexico is both a victim and a perpetrator of climate change. The first, due to its geographical location, makes it a territory vulnerable to the impacts of climate change, as it is located in the southern part of the Northern Hemisphere and borders the Atlantic and Pacific Oceans (SEMARNAT and INECC, 2018). Official information has indicated that "as a result of atypical hydrometeorological phenomena, losses have occurred in agriculture and livestock, affecting more than 50 percent of total production..." (Official Gazette, 2021, p. 11). Future scenarios are not encouraging, as climate change is expected to significantly compromise the development of several territories in the country (SEMARNAT and INECC, 2018). Mexico is a victim of climate change because it produces around 1.4% of the world's primary energy and is the fifteenth largest producer globally. Oil is the country's main source of energy. Its energy demand is made up of: 44.4% transportation, 30.3% industry, 18% residential, commercial, and public sectors, and 3.1% agriculture (SEMARNAT and INECC, 2018).

Climate change policy in Mexico

Mexico has been characterized, internationally, by playing an active role in the enactment of laws, instruments, and the establishment of an institute on climate change. These are: the General Law on Climate Change (LGCC); the National Climate Change Strategy (ENCC); the various Special Climate Change Programs and the National Institute of Ecology and Climate Change (INECC). In addition, various bodies that collaborate in this area have been established, such as the Inter-Ministerial Commission on Climate Change (CICC) and the National Climate Change System (SINACC), under the leadership of the Ministry of Environment and Natural Resources (SEMARNAT). This development took place in the first twelve years of the 21st century and was the result of the international agreements signed.

To date, other factors have been added that favor the issue's continued inclusion on the institutional agenda, such as: a) the perception of increasing vulnerability, b) advances in climate change discourse in the academic and government sectors, and c) the increase in institutional responses to adaptation in local governments (Wilkinson and Aragón, 2019, p. 64).

The Economic Importance of Tourism in Mexico

Tourism is one of the country's main economic activities. For example, in 2022, the Tourism Gross Domestic Product (TGDP) reached 2,372,556 million pesos, equivalent to 8.5% of the Gross Domestic Product (INEGI, 2024). Of the total, passenger transportation contributed 19%; restaurants, bars, and nightclubs 14.9%; lodging 20.6%; Among others (INEGI, 2023). More than 40 million foreign visitors arrived in the country in 2023, spending an average of over \$1,155 (Tejeda, 2024). This is explained by Mexico's great cultural and natural diversity and its proximity to the United States of America.

Several authors have already identified some of the impacts of climate change on tourism in Mexico, such as rising temperatures, heat waves, more intense storms and droughts, diminishing water bodies, and increased consumption, among others (Rodríguez Sosa, 2015; Cárdenas, 2023).

Given this scenario, it is striking that no mitigation measures to counteract climate change were identified in the tourism sector in the first decades of the 20th century by the academic and government sectors. While the adaptation strategies that have been included have been, from improving alert systems, reviewing and complying with construction regulations, promoting intersectoral coordination, diversifying economic activities in tourist destinations, etc. (Rodríguez-Sosa, 2015). Specifically, the current PECC proposes six strategies, in which the Ministry of Tourism (SECTUR) plays an important role. As shown in the following table:

Table 1. Adaptation and mitigation strategies specifically for the tourism sector

Specific action	Type of specific action	Departments and/or Entities responsible for implementing the specific Action (coordinated institutions)	Coordinating Department or Entity (in charge of monitoring)
Promote compensation mechanisms in the tourism sector for the development of ecosystem-based adaptation measures.	Specific	SECTUR	SECTUR

Promote compliance with recommendations derived from climate change vulnerability studies in tourist destinations in order to reduce associated risks.	Specific	SECTUR	SECTUR
Strengthen the technical capacities of the tourism sector for the conservation and sustainable use of natural resources through the design and implementation of Ecosystem-based Adaptation (EbA) measures that consider local vulnerability and capacities.	Specific	SECTUR	SECTUR
Promote tourism sector actions focused on promoting energy efficiency in hotel establishments.	Coordination	SECTUR SEMARNAT	SECTUR
Promote the diversification of ecosystem services based on territorial suitability and land use through their inclusion in ecological, territorial, and urban development programs, as well as tourism and agricultural programs.	Coordination	SEMARNAT SEDATU SECTUR	SEMARNAT
Generate criteria that help plan tourism real estate investment projects adapted to climate change.	Specific	SECTUR	SECTUR

Source: Prepared by the authors, based on the Official Gazette, 2021.

There are other strategies that are being implemented by other agencies but that benefit the tourism sector, such as promoting meteorological warning systems, conserving natural resources, boosting passenger rail transport, and preventing and addressing sargassum flooding, among others.

Conclusions

This article shows that Mexico has laws, instruments, and institutions to adapt to and mitigate climate change. Six strategies have been proposed for the tourism sector. However, it remains to be established how to implement them, whether with the participation of SECTUR or other agencies. This requires robust budget allocations, encouraging leadership, and fostering cooperation and goodwill among all sectors.

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