

Tren Maya: an economic booster or an environmental and social disaster?

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Tren Maya

Project

The Tren Maya is a large-scale infrastructure project in Mexico involves constructing a 1,554-kilometer railway line.

Objectives

This project aimed at boosting economic development and tourism industry in the southeastern states of Mexico.



The consequences of the project

Environmental

Deforestation
Impact on Biodiversity
Habitat Destruction
Threat to Protected
Areas
Increased Pollution

Social

Displacement of
Local Communities
Cultural Erosion and
Loss of Identity
Increased Social
Conflict

Economical

Increased Energy Demand
High Financial Costs
Uncertain Economic
Benefits
Debt and Economic
Sustainability



From gettyimages by Matthew Horwood

Energy crisis in Mexico

Dependence on fossil fuels

A significant portion of the country's electricity is generated using oil and gas, contributing to high carbon emissions

Energy infrastructure strain

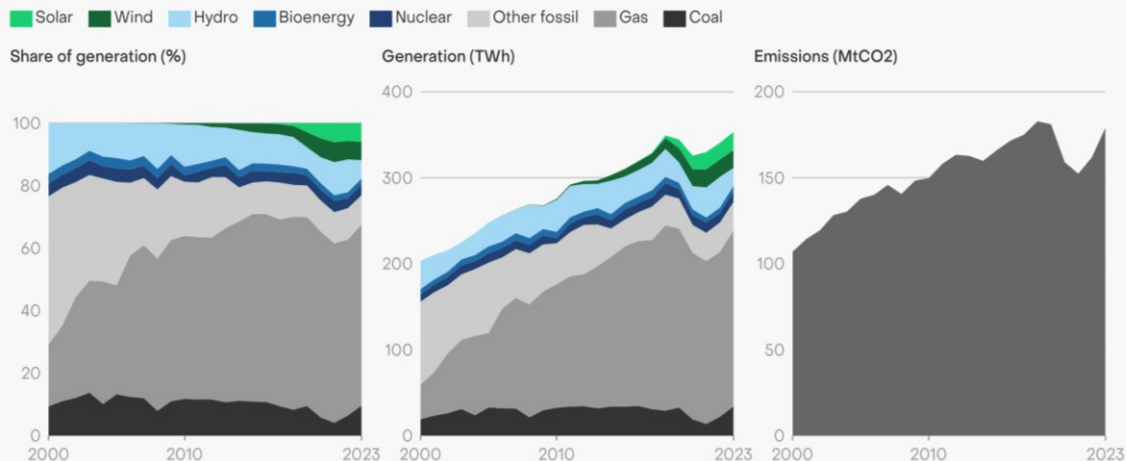
Growing demand for energy has placed pressure on existing infrastructure, leading to blackouts and energy insecurity in some areas

Transition to renewables

Efforts to shift toward renewable energy have been inconsistent, with government policies sometimes favouring state-owned oil companies over green energy investments

Mexico's power sectors

Mexico: Power sector overview



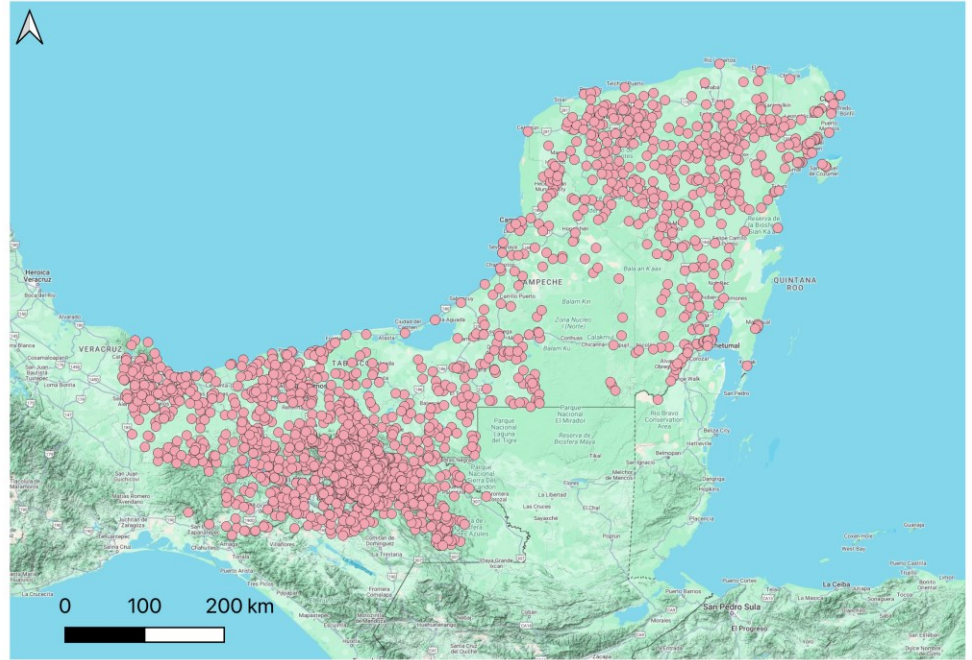
Source: Annual electricity data, Ember

EMBER

[x.com](https://www.ember.com)

The Mexican government has promoted projects that increase **energy generation** based on oil and natural gas, while renewable energies have had limited progress.

Mexico's energy sector has faced a notable **lack of investment** in recent years.




Localities without access to electricity in the study area

Approximately **1.5 million people** remain without electricity, and segments of the population, especially in rural areas, struggle with access to affordable, reliable energy.

Tren Maya and energy issue in Mexico

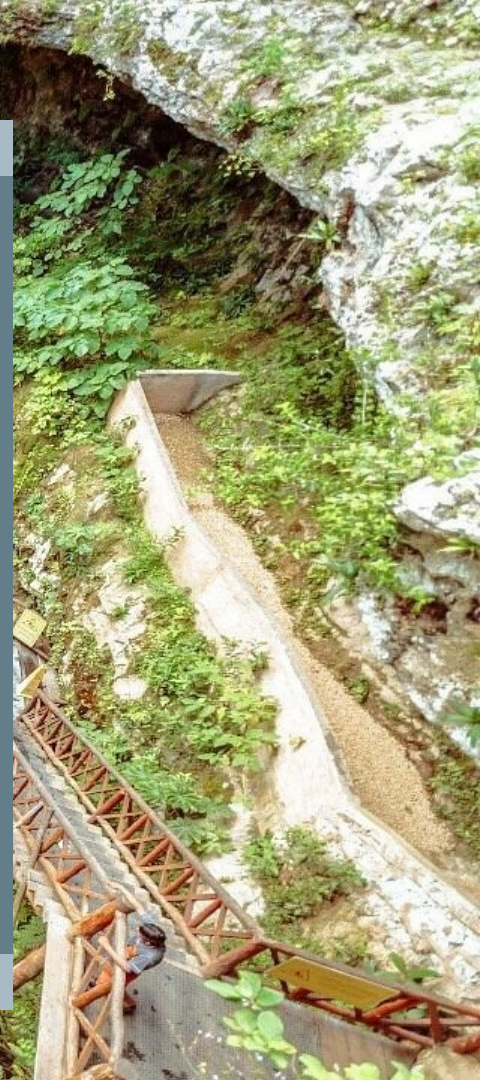


- **Energy Demand:** The construction and operation of the Maya Train increases energy demand, which could further pressure on existing infrastructure
- **Sustainability:** Although the project promotes electrification, this could reinforce the country's dependence on non-renewable energy sources if more clean energy is not integrated into the system
- **Local Impacts:** Industrial activities associated with the project may exacerbate competition for energy resources and cause disputes in local communities



Study project: Environmental and Social impacts of the Tren Maya project

- Analyzing the Environmental Impact Assessment provided by Mexican government
- Use of a methodology based on a quali-quantitative approach
- Creating sensitivity and area of influence maps in GIS environment
- Studying the real impacts through interviews with specialists living in the area



Objectives



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CONDUCTION OF A DETAILED RESEARCH TO EVALUATE THE **SIGNIFICANCY** OF THE IMPACTS AND DISCUSSING THE **MITIGATION METHODS**

PRODUCTION OF **SENSITIVITIES SCENARIOS** OF THE ELEMENTS LIKELY TO BE AFFECTED BY TREN MAYA

Progress markers

- Collecting and *analysing* data related to environmental, social, economical and energy aspects in the area of the project in GIS environment
- Having *semi-structured interviews* with specialists living in the area and aware of the real situation
- Conducting a *multicriteria decision analysis (MCDA)* to provide sensitivities scenarios of the elements likely to be affected by the project, using a set of decisional criteria, shared with key informants through interviews



Perspectives

By evaluating *various scenarios* related to the impacts of the Tren Maya project, presenting the socio-economic, energy, and environmental aspects through a *multi-criteria approach*, and conducting a comprehensive impacts analysis, this study should enable us to visualize *potential local impacts* across multiple dimensions on a broad scale.



Photo: Valentina Cucchiara

Resources

- [Tren maya destroying yucatan cenotes- By Mark 'Crowley' Russell - July 2024](#)
- [Mexico's Risky New Energy Reform - By ALBERTO QUIROZ AND CARLOS RAMÍREZ FUENTES - November 2024](#)
- [The Mexican Energy Sector after AMLO - By Carlos Ramírez & Mónica R. Díaz- March 2024](#)
- [The Mayan Train: A train for Mexico, built in Mexico - Alstom Group - 2022](#)
- [The Power Problem: Nearshoring and Mexico's Energy Sector - July 2024 | Tony Payan, Rodrigo Montes de Oca, Rolando Fuentes, Roberto Duran-Fernandez](#)

Cover photo:

- [Across the Yucatan heartland: section of the Cancún-Kantunil road alongside the Maya Train tracks near Valladolid, Yucatan, 1 December 2021](#)



Thank you

