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## Introduction of the American Bullfrog in the habitat of Laguna de Yuriria, Guanajuato as a social enterprise.

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## ABSTRACT

The Yuriria Lagoon, classified as a Ramsar site, is a critical ecosystem located in the municipality of Yuriria, Guanajuato, which had a population of approximately 68,740 inhabitants in 2020. This study aims to explore the feasibility of developing a sustainable social enterprise through the creation of controlled environments, known as frog farms, within the lagoon. The study presents and compares results obtained from reviewing successful cases in nearby locations and a feasibility analysis based on a similar recent venture featured on "Shark Tank." This analysis helps identify common elements and key arguments that support the formulation of a proposal to the municipality, with the goal of generating a sustainable source of income while promoting the conservation of regional biodiversity.

## METHODOLOGY



**Regional context analysis:** Evaluate the current context of Yuriria Lagoon in socio-economic, environmental, and infrastructure terms.



**Brainstorming:** Generate proposals for social enterprises that can be implemented in the region, considering economic viability and social impact.



**Needs identification:** Identify the main social, environmental, and economic needs of the local community, based on consultations and regional data.



**Development of the theoretical framework:** Build a conceptual framework to support the project, considering theories on social entrepreneurship, sustainability, and conservation.



**Review of successful cases:** Use the 5W 1H technique (What, Who, When, Where, Why, and How) to analyze successful projects in nearby locations that have implemented similar



**Feasibility analysis:** Assess the project's feasibility based on an analysis of a similar enterprise model presented on "Shark Tank," considering its applicability in Yuriria.



Illustration 1.- Large frogs (up to 20 cm), with olive green skin and dark spots, voracious and adaptable to different aquatic habitats.

## JUSTIFICATION

The Yuriria Lagoon, designated as RAMSAR site number 1361 on February 2, 2004, covers an area of 15,020 hectares and had a population of 68,740 inhabitants in 2020. This study aims to explore the feasibility of developing a sustainable social enterprise through the establishment of controlled environments (frog farms) within the lagoon. The results are presented and compared using two approaches: first, an analysis of successful cases in nearby locations, and second, a feasibility assessment of a similar project recently featured on "Shark Tank." This analysis helps identify common elements and key arguments that support the formulation of a proposal to the municipality, with the goal of generating a sustainable source of income while promoting biodiversity conservation in the region. This venture aligns with Sustainable Development Goals 1, 13, and 14 of the 2030 Agenda.



Illustration 2.-  
Map of the Yuriria Lagoon.



## INTRODUCTION

This project aims to evaluate the feasibility of developing a sustainable social enterprise through the establishment of a specialized frog farm focused on the reproduction, breeding, commercialization, and distribution of bullfrogs (*Lithobates catesbeianus*) in the Yuriria region, Guanajuato. By leveraging the potential of this species, native to North America, the project seeks to generate a sustainable income source for the local community while contributing to the conservation of biodiversity in the area. A review of successful cases (state of the art) in frog farming is essential for analyzing effective projects in frog breeding and commercialization, particularly in the context of sustainable enterprises.

Successful Cases:

- Case 1: Successful frog farm in Tlaxcala, highlighting effective practices and results achieved in the reproduction and commercialization of frogs.
- Case 2: Second successful case involving 28 farms in the state of Michoacán, emphasizing the strategies employed and the accomplishments in frog breeding and export distribution.

Comparison with the Yuriria Context

- Local Applicability: Analyze which aspects of these cases can be adapted or modified for implementation in Yuriria Lagoon.
- Challenges and Opportunities: Identify potential obstacles and advantages that may arise when adapting these models to the Yuriria region.

## RESULTS

Based on the identification of needs in social entrepreneurship, an innovative idea has been developed and is currently being evaluated as a sustainable business, pending a thorough feasibility analysis. The current environment in Yuriria presents a significant challenge: the Yuriria Lagoon is experiencing severe drought due to extreme weather conditions, including a heat wave that has drastically reduced its water storage capacity, leading to its complete desiccation in 2024. According to the National Center for Disaster Prevention (CENAPRED), the drought poses a medium risk, while the heat wave presents a high risk. These conditions, combined with the destruction of the wetlands that once supported the bullfrog, have had a devastating impact on the region's ecosystem and biodiversity. Effective mitigation measures are essential to address these challenges and protect the environment.

## CONCLUSIONS

This study underscores the urgency of implementing mitigation measures to address the environmental crisis in the Yuriria Lagoon. The proposal to develop frog farms not only offers a potential solution for the recovery of the bullfrog but also presents an opportunity to generate sustainable income and promote environmental conservation. As we proceed with the feasibility analysis, collaboration with the municipality and other stakeholders will be crucial to ensuring the success and viability of the venture, contributing to the ecological and economic revitalization of the region.

## REFERENCES

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