

# La Laguna de Yuriria, Guanajuato como un sistema ecológico integral generador de desarrollo regional

tegral generador de desarrollo regional Granillo, I., López-López, E and Martínez, E.







SUSTAINABLE DEVELOPMENT GOALS

We support the Sustainable Development Goals

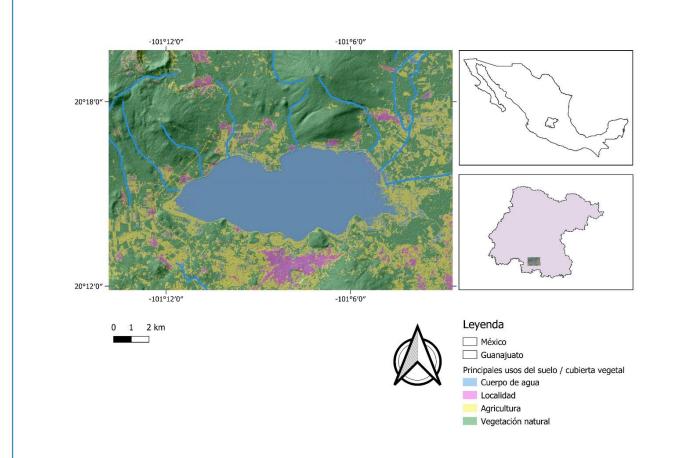
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### Introduction

At a global level, the approach to solutions related to the quality of the water in aquatic ecosystems is one of the most important challenges for many countries because the water resource is part of the social and economic development of a region (Landa and Carabias, 2007).

Within this panorama, the quality of water in the Yuriria Lagoon constitutes a priority issue. Therefore, the objective of this study is to Laguna de analyze the Yuriria, Guanajuato as an integral ecological system that generates regional development through the application Water Quality Index (ICA) 1987) qualitative (Dinius, and methodologies (semi-structured interviews and RQDA Software (Rbased Data Qualitative Analysis)).

**Methodology**. The methodological instruments were semi-structured interviews and questionnaires applied at a distance. The data obtained were processed with the RQDA software. This Software helped to interpret the texts of each interview into concepts (codes), obtain the number of times each was repeated (retrieved codings) and identify the perceptions in each one (RQDA 2019). To later, classify them in the three dimensions of human well-being (material, relational and subjective) (Infante and Arce, 2015). This research is under development, so the part of the ICA calculation (Dinius, 1987) has not yet been carried out.







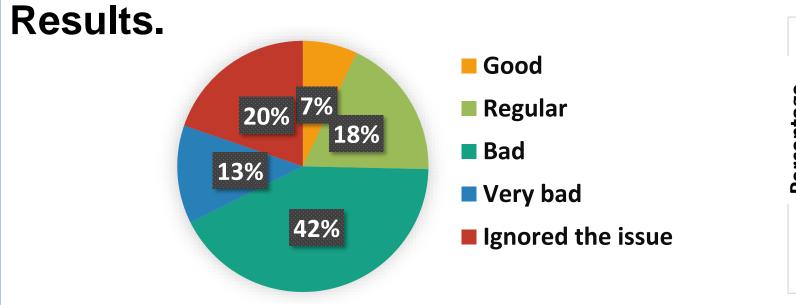


Fig. 1. Perceptions of the total number of interviewees regarding the concept of the condition of water quality

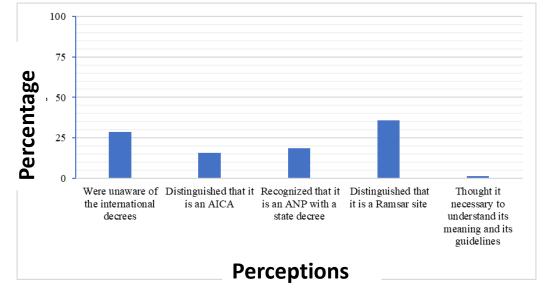


Fig. 2. Percentage of the perceptions of the total of those interviewed in the concept of knowledge of international decrees

Conclusions. The perceptions showed that there are very different points of view and that the dynamics of each sector is complex. This should continue to be studied because each one has the potential to contribute, together and according to their possibilities, to the sanitation of the lagoon.

Government actions to improve water quality was a concept that was constantly mentioned. This suggests that the environmental, economic, social and cultural aspects that involve the Yuriria lagoon depend considerably on the role played by the government.

#### References

Landa, R., y Carabias, J. (2007). Nuevas Perspectivas frente a los problemas del agua en México. En J. L. Calva, *Sustentabilidad y Desarrollo Ambiental* (págs. 117-132). Miguel Ángel Porrúa.

Dinius, S. (1987). Design of an Index of water quality. *Water Resour*, 833-842. Huang, R. (2012). RQDA: R-based Qualitative Data Analysis (R package version 0.2-3) [software]. http://rqda.r-forge.r-project.org/.

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