Cosmovision and Geothermal: proposal for direct uses of the geothermal resource El Carrizal, Mexico

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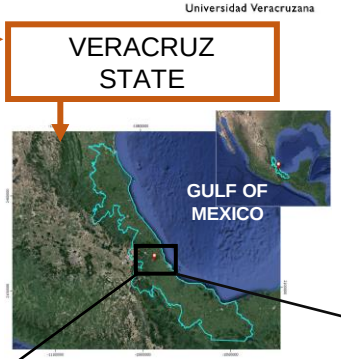
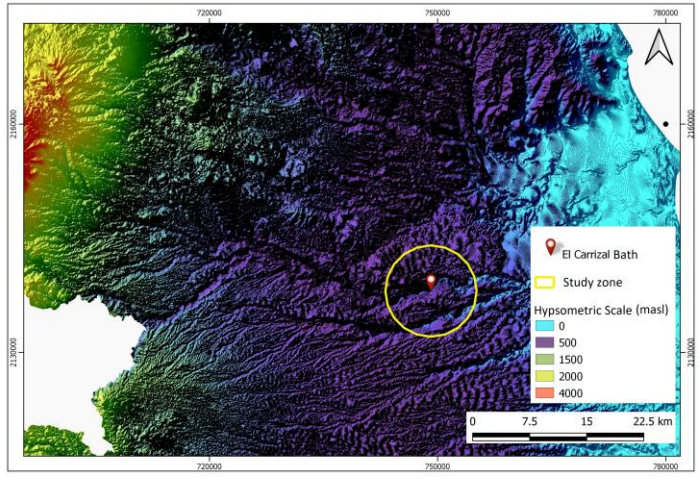
STUDY AREA

VERACRUZ STATE



EL CARRIZAL BATHS

REGIONAL HYPSOMETRIC ANALYSIS (5M)



The study area is located in the south-central part of the state of Veracruz, Mexico.
The geomorphological characteristics include steep hills that respond to the Cretaceous-Quaternary period. The geological formations in the area derive from the union between the provinces of the Transversal Neovolcanic Belt and the Southern Gulf Coastal Plain.
To the north of the study area, abundant active volcanism (thermal sources) and abundant local faults that favor the ascent of fluids are reported.
The study area has a surface heat flux in the range of 150 to 200 mW / m2.
There are several hot springs in the area, the work will focus on Los Baños El Carrizal.

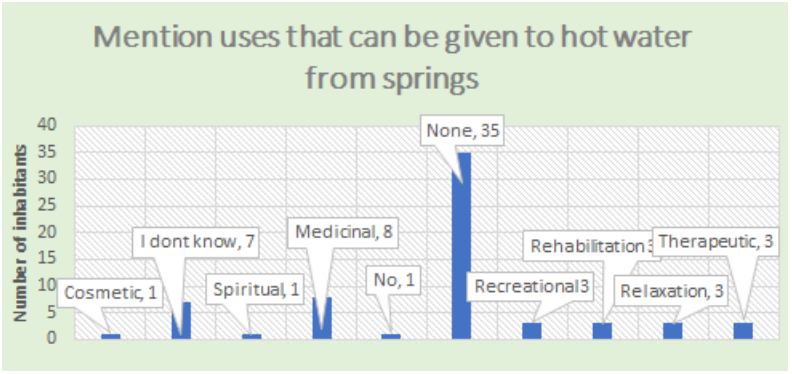
The main objective is to propose a project of direct uses of the geothermal resource, which can economically benefit the population in a comprehensive and sustainable way.

Methodology includes two steps:

a) Geological and geochemical characterization of the resource (Field work not yet done)
b) b) Study of social perception and identity symbolism of the resource (Digital Survey was implemented)

Finally, the design of the direct uses project will contemplate both lines of research, to obtain a technically feasible, participatory proposal that respects uses and customs in the territory.

PERCEPCIÓN SOCAIL DEL RECUSO HIDROTERMAL



Preliminary results

Preliminary cabinet research reveals a possible low-medium enthalpy potential (~ 50 ° C on the surface, bicarbonate neutral waters).
According to the results obtained from social research:

(i) the population is unaware of the implementation of another use for thermal manifestations beyond the current use of balneology.
(ii) the population recognizes hot springs as a place of dispersal, relaxation, and health benefits.

The perception of the resource, so far, allows the planning of geothermal projects in conjunction with the population.
We highlight the need for scientific dissemination with the managers of the territory and with the closest population as a tool to achieve a participatory project with social acceptance. The main topics would be the geological description of the geothermal (and natural resources in general) of the area, for a better use and care of them.

Due to pandemic conditions, obtaining results has been slow, results are preliminary, and the project is still ongoing.

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