Zoning of probability of contagion of COVID 19 and common respiratory diseases aggravated by climatic, environmental and social factors.

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Worldwide, there has been an unusual epidemiological phenomenon with the SARS -COV2 virus, which has had important repercussions at the social and economic level and has left the country in a vulnerable situation. From the beginning, various epidemiological mathematical models have been presented that simulate the behavior of the contagion over time, however, these do not contemplate climatic and spatial variables. It is well known that respiratory problems are associated mainly with environmental pollution, sudden changes in temperature or low temperatures, and high humidity content in the environment. Therefore, it is necessary to carry out a quantitative projection of the behavior of the virus in environmental matrices of strategic importance for human health. For this project, a multicriteria analysis was carried out that consists of the conjugation of the different thematic maps related in a categorized way by the level of affectation, divided into five classes, from very low to very high, considering the repercussions and relationship of each of these factors. With respect to the mitigation or spread of respiratory diseases, respectively. For this, 3 scenarios were carried out from a weighted linear sum of the projected levels of affectation under 3 considerations: Climate susceptibility: minimum temperatures, average temperatures, height, and humidity; Environmental susceptibility: with urban mobility, industrial activity, and Social exposure: Population density and marginalization. The result will allow us to obtain a zoning map for the Probability of contagion due to environmental and social conditions at the national level that highlights the population that needs greater mitigation efforts and that can be used freely by the corresponding authorities.