

Health and climate challenges in Ecuador

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South American countries like Ecuador are at risk of an increasing burden of climate-sensitive communicable and non-communicable diseases. Specifically, Ecuador remains far from clearly and systematically including a health perspective in local-level climate change adaptation planning.¹ Following the recent launch of The Lancet Countdown South America report 2022,² the Ecuador policy brief is expected to soon reach the desks of mayors, policy advisors, and council members in charge of decisions and policy-making.³

The Ecuador policy brief includes three of the most critical Lancet Countdown indicators (of 43): heat and exposure to warming, urban green space, and vulnerability to mosquito-borne diseases.⁴ Indicators were selected to identify solutions that could be implemented in the short term and with relative agility, considering the country's current resources, governance frameworks, and capacities.

In the brief, we call for increased intersectoral government coordination, monitoring of climatic risk in vulnerable populations, protecting and recovering green areas in urban settlements, and improving vector-borne disease surveillance by using meteorological data to develop forecasting models for the health system.⁴ Although these recommendations are not new in the scientific literature,⁵ what is new is a path forward by linking them to existing planning tools.

Ecuador has two ready-to-implement resources for local planning that could incorporate health adaptation: the Organic Code of Territorial Organization, Autonomy and Decentralization (COOTAD, in Spanish) and the 'Tools for Integrating Climate Change Criteria in Territorial Development and Planning'.⁴ These resources can be applied synergistically, creating an operational legislative framework for local governments and technical recommendations to address climate vulnerability and health impacts. For example, urban expansion in Ecuador must include a

plan to increase greenness for major cities like Quito or Guayaquil,⁴ which will enhance public places for wellness, social interactions, and even potential economic opportunities.

The inevitability of adverse climatic outcomes on health is a stark call to action. Evidence-based indicators reported by the Lancet Countdown coupled with in-situ national assessments aim to contribute to debates concerning local-decision and policy makers and their constituents in Ecuador. These approaches held the promise to promote local-level health adaptation thanks to the current available data and tools.^{3,4,6}

Contributors

All authors contributed equally.

Declaration of interests

All authors declare being coauthors in *The Lancet Countdown 2022 Policy brief for Ecuador*.

References

- 1 MAATE. Plan Nacional de Adaptación al Cambio Climático del Ecuador (2023-2027). Quito, Ecuador, [Internet]. <https://unfccc.int/sites/default/files/resource/PLAN-NACIONAL-DE-ADAPTACION-2.pdf>; 2023. Accessed March 23, 2023.
- 2 Hartinger S, Yglesias-González M, Blanco-Villafuerte L, et al. The 2022 South America report of the Lancet Countdown on health and climate change: trust the science. Now that we know, we must act. *Lancet Reg Health Am*. 2023;20:100470.
- 3 Romanello M, Di Napoli C, Drummond P, et al. The 2022 report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels. *Lancet*. 2022;400:1619–1654.
- 4 Torres I, Stewart-Ibarra A, Borbor-Cordova M, Romero-Alvarez D. *Policy brief for Ecuador*. The Lancet Countdown; 2022 [Internet]. <https://www.lancetcountdown.org/resources/>. Accessed April 16, 2023.
- 5 Neta G, Pan W, Ebi K, et al. Advancing climate change health adaptation through implementation science. *Lancet Planet Health*. 2022;6:e909–e918.
- 6 Montenegro M, Campozano L, Urdiales-Flores D, et al. Assessment of the impact of higher temperatures due to climate change on the mortality risk indexes in Ecuador until 2070. *Front Earth Sci*. 2022;9:1340.



The Lancet Regional Health - Americas 2023;22: 100501

Published Online xxx
<https://doi.org/10.1016/j.lana.2023.100501>

DOI of original article: <https://doi.org/10.1016/j.lana.2023.100470>

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