

## LETTER TO THE EDITOR

# Climate Change as a Risk Factor for Food Insecurity in Spain

JULIETTE DUFFY

In their recent paper “Food Security as a Social Determinant of Health: Tackling Inequalities in Primary Health Care in Spain,” *Mireia Campanera, Mercè Gasull, and Mabel Gracia-Arnaiz* explore the role that primary health centers play in addressing food insecurity in the Catalonia region of Spain and how food security is inextricably linked with the social determinants of health.<sup>1</sup> The paper highlights barriers to access to healthy, safe, and sufficient food, but it does not address one overriding confounding factor: climate change. In this letter, I illustrate the trickle-down effect that climate change has on food insecurity in Spain.<sup>2</sup>

There is widespread agreement that climate change is contributing to increased food insecurity around the globe.<sup>3</sup> The 2022 report of the *Lancet* Countdown states that extreme heat was the cause of an extra 98 million people reporting moderate to severe food insecurity in 2020 compared to 1981–2010.<sup>4</sup> Research in the Aragon region in Spain (neighboring the Catalonia region) indicates that this area can expect to see the highest maximum temperatures in Spain, as well as the greatest intensity of heat waves, with increasingly intense periods of drought in the future.<sup>5</sup> These regions of Spain should prioritize mitigation strategies that reduce greenhouse gas emissions to prevent the threat of intense heat waves and potential impacts that heat and drought may have on food security. The Intergovernmental Panel on Climate Change highlights that prioritizing the local production of fruits and vegetables in Spain, rather than importing produce, can reduce greenhouse gas emissions and promote food security.<sup>6</sup>

Climate change exacerbates social and health inequities.<sup>7</sup> Campanera et al. note that current socioeconomic strains are making food unaffordable for many families and individuals. Other research suggests that by 2035 food prices will have increased a further 60% in Spain; heat and decreased precipitation are reducing the quality and yield of harvests, increasing the price of fresh food and intermediate products along the food production chain.<sup>8</sup> Despite recommendations by primary health centers to eat healthy diets, this will have little effect if vulnerable patients cannot afford healthy food.

Climate-change-induced temperature increases have an impact on people with chronic disease and malnutrition; for example, temperature increases have a detrimental effect on the body mass index of people living in hot countries, in part because of the decrease in physical activity in hot climates.<sup>9</sup> With Spain’s increasing temperatures, higher levels of physical inactivity could compound the need identified by Campanera et al. to include food in the diagnosis, treatment, and prevention of disease.

The relationship between climate change and food insecurity in Spain cannot be ignored. Understand-

---

JULIETTE DUFFY is a master of public health student at Monash University, Melbourne, Australia.

ing the social determinants of health that influence food insecurity and being able to analyze this at the primary health care level may help prevent health problems. However, climate change risks must be factored into health, social, and food policies to protect and promote the right to food and health for people in Spain and elsewhere.

## References

1. M. Campanera, M. Gasull, and M. Gracia-Arnaiz. "Food Security as a Social Determinant of Health: Tackling Inequalities in Primary Health Care in Spain," *Health and Human Rights Journal* 25/1 (2023).
2. P. R. Shukla, J. Skea, E. Calvo Buendia, et al. (eds), *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems* (Cambridge: Cambridge University Press, 2022).
3. M. Romanello, C. Di Napoli, P. Drummond, et al., "The 2022 Report of the *Lancet* Countdown on Health and Climate Change: Health at the Mercy of Fossil Fuels," *Lancet* 400/10363 (2022).
4. Ibid.
5. E. Gaitán, R. Monjo, J. Pórtoles, and M. R. Pino-Otín, "Impact of Climate Change on Drought in Aragon (NE Spain)," *Science of the Total Environment* 740 (2020).
6. See Shukla et al. (see note 2).
7. N. Valentine, O. Ajuebor, J. Fisher, et al., "Planetary Health Benefits from Strengthening Health Workforce Education on the Social Determinants of Health," *Health Promotion International* 37/3 (2022).
8. M. Kotz, F. Kuik, E. Lis, and C. Nickel, "The Impact of Global Warming on Inflation: Averages, Seasonality and Extremes," European Central Bank Working Paper Series No. 2821 (2023); "El cambio climático aumentará los precios de los alimentos hasta un 60% para 2035, dice el Banco Central Europeo," *CE Noticias Financieras* (May 24, 2023).
9. M. T. Trentinaglia, M. Parolini, F. Donzelli, and A. Olper, "Climate Change and Obesity: A Global Analysis," *Global Food Security* 29 (2021).