

CORRESPONDENCE

Reply to: Climate change and TB: the soil and seed conceptual framework

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We thank Sinha and colleagues¹ for their interest in our recent article,² and welcome their broad conceptual framework, which describes the effect of climate change on TB by either aiding TB transmission (the seed) or by making the hosts more vulnerable to the disease (the soil). We completely agree with their approach.

Sinha et al. focus on the important issue of food security and malnutrition and the risk that these two factors through climate change pose to increasing TB incidence, severity and mortality.¹ There are other examples. Cho et al. showed in Taiwan that there is an increased risk of TB in early stage chronic kidney disease.³ In 2019, an editorial in the *New England Journal of Medicine* highlighted the emergence of chronic kidney disease of unknown cause (CKDu), which is becoming more common and pervasive in the hot and humid regions of

Central America, South America, Africa and India.⁴ While the precise pathological cause is yet to be determined, the disease is related to heat exposure and dehydration, and the working hypothesis is that CKDu is a form of heat stress-induced kidney disease arising from rapidly changing environmental conditions. We believe that the TB community should take note of this, and advise that reducing exposure to the sun and heat and improving hydration with safe water and electrolytes for those working outdoors in these environments might help to reduce the incidence of CKDu, which in turn might reduce the incidence of TB.⁵

In 2020, Satyanarayana and colleagues drew attention to the inter-connectedness of the Sustainable Development Goals (SDGs) and the goal of ending the TB epidemic by 2030.⁶ The key areas highlighted for action were ending poverty (SDG 1), ending hunger (SDG 2), ensuring access to affordable and clean energy (SDG 7), promoting decent work and economic growth (SDG 8), reducing inequalities (SDG 10) and making cities and communities safe, resilient and sustainable (SDG 11). It is becoming clearer by the day that urgent action to combat climate change and its impacts (SDG 13) must be added to this list!

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References

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