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Contamination of groundwater and soil as well as risk of further transmission due to COVID19 infected and other burials: Does Sri Lanka's environment pose a unique risk?

S. Gammanpila^{1,2}, A. Nijamdeen¹, and L. Zubair^{3*}

¹*Tropical Climate Guarantee, Rajawella, Kandy, Sri Lanka*

²*University of Peradeniya, Peradeniya, Peradeniya, Sri Lanka*

³*Federation for Environment, Climate and Technology, Climate and Technology, Akurana, Kandy Sri Lanka*

COVID-19 is spread mainly through close contact from person-to-person or respiratory means. However, concerns have been raised of possible transmission through contact with infected persons, either dead or alive. Concerns over contamination of the land and groundwater as a result of the burial of COVID19-infected bodies, as well as subsequent human re-infection, have led to a change in Sri Lankan policy, which has allowed both burials and cremations from April 11, 2020. After the ban of a year, burial is only permitted in Oddamavadi in the Batticaloa district. Here, we solely consider whether Sri Lanka's terrain, rainfall, temperature, soils, and groundwater are unique. An appointed panel of medical specialists and an ecological scientist argued that the unique rainfall, temperature, soils, and groundwater warranted taking the precautionary principle - that is unless one can prove that burials are safe with certainty that it should not be permitted given the risks. In most burials in Sri Lanka, the body is either placed in a wooden coffin or wrapped in cloth. In the latter case, the grave is at least 8 feet deep and in places with no water bodies or nearby wells. Wastewater from the COVID infected persons particularly that are exposed in drains routed to tanks, or rivers, do require attention to avoid human and animal exposure. The groundwater depth in Sri Lanka is deep and mapped so that aquifer contamination can be avoided by choice of burial sites and site inspection. If there is leaching from the burial sites, there may be risks of transmission of some bacterial diseases but not viruses such as Covid19. Sri Lanka's climate, topography, soils, drainage all show diversity, but all of this is not unique in comparison to the globe. Scientific understanding of the mechanisms of covid-19 transmission and the role of the environment is needed to mitigate the risks from burial choices and practices. The 1000-fold greater risks from contamination of wastewater from patients has not received the attention of environmental scientists or public health officers given to the impacts of burials nor have the precautionary principle been operative here.

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E-mail: lareefzubair@gmail.com