



**Figure S2. Correlations between fungal pathogen diversity and socio-economic indicators.** Spearman correlation coefficients (color scale) between fungal pathogen alpha diversity measured as Shannon index and observed species richness and six socio-economic variables across global soil samples ( $n = 3,200$ ). Asterisks denote significance levels ( $p < 0.05$ ,  $p < 0.01$ ,  $p < 0.001$ ). Pathogen diversity is positively associated with population size and density, and negatively correlated with GDP per capita and Human Development Index (HDI).