

Supplementary information

Spatial co-distribution of HIV, tuberculosis, and malaria in Ethiopia

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Supplementary tables

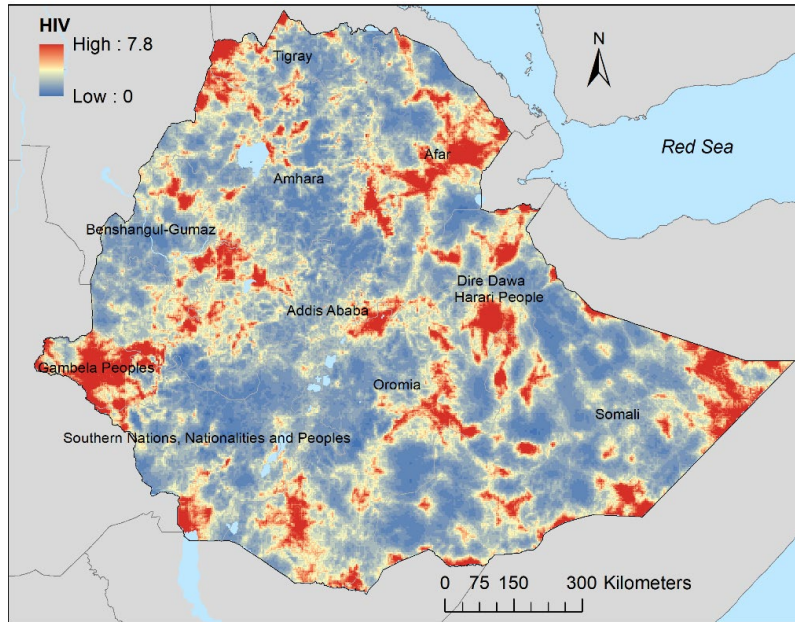
Table S1: Data sources and definitions of covariates

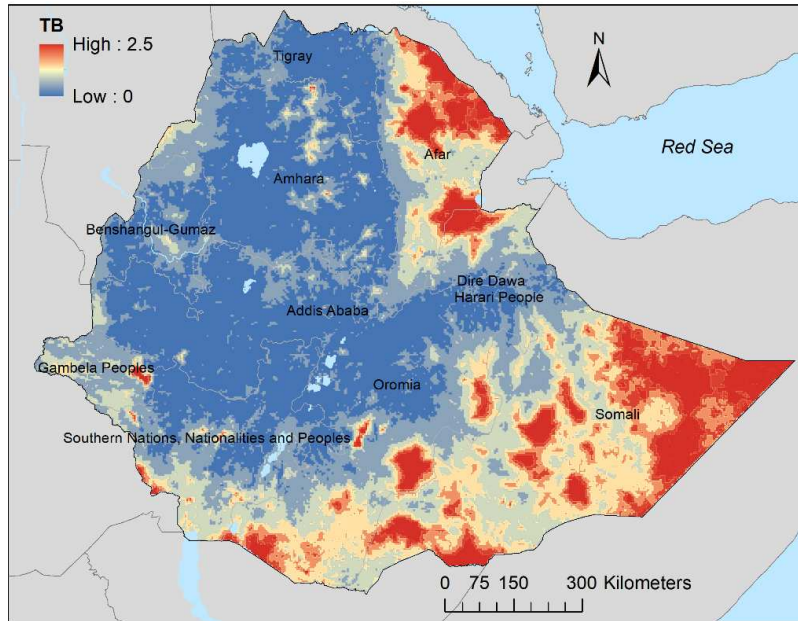
Covariates	Data sources	Definitions
Population density	WorldPop	Number of people per square kilometre (grid) ¹
Travel times to cities	Malaria Atlas Project (MAP)	Travel time in minutes to the nearest city with a population of more than 50,000 ²
Temperature	WorldClim	Annual mean environmental air temperature (°C) ³
Precipitation	WorldClim	Annual mean rainfall (mm) ³
Altitude	Shuttle Radar Topography Mission (SRTM)	Elevation of the earth land surface in km ⁴
Distance to water body	Global Lakes and Wetlands Database (GLWD)	Distance to permanent and semi-permanent water based on presence of lakes, wetlands, rivers and streams, and accounting for slope and precipitation ⁵
Access to healthcare facilities	Malaria Atlas Project (MAP)	Walking travel times in minutes to the nearest health facility ⁶

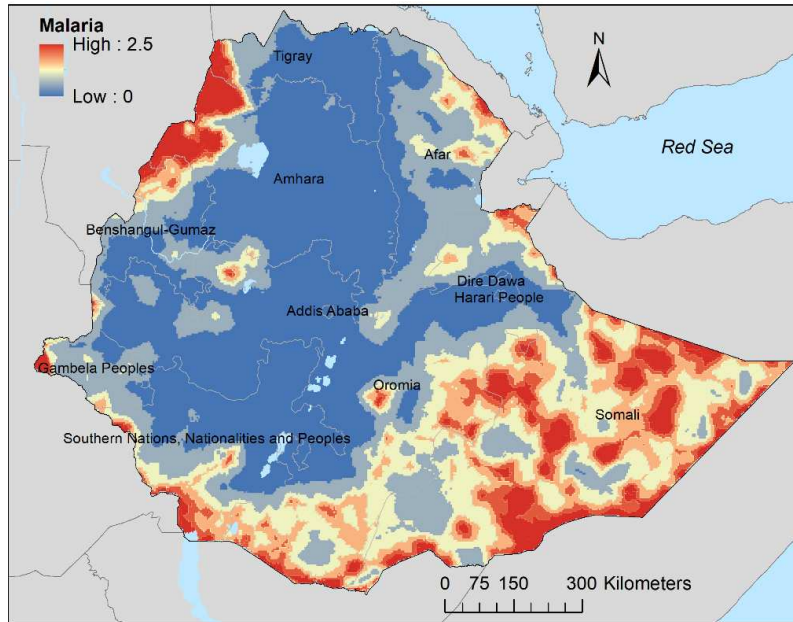
Table S2: Watanabe-Akaike information criterion (WAIC) values corresponding to different model specifications.

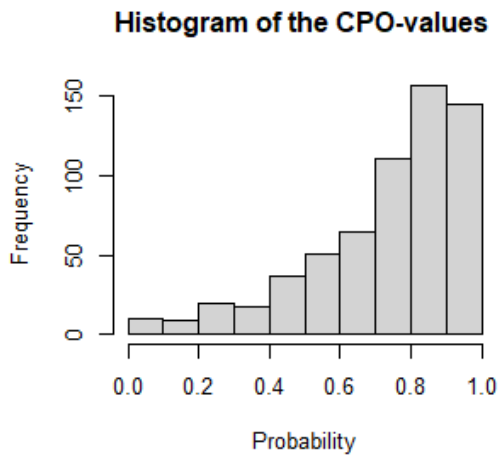
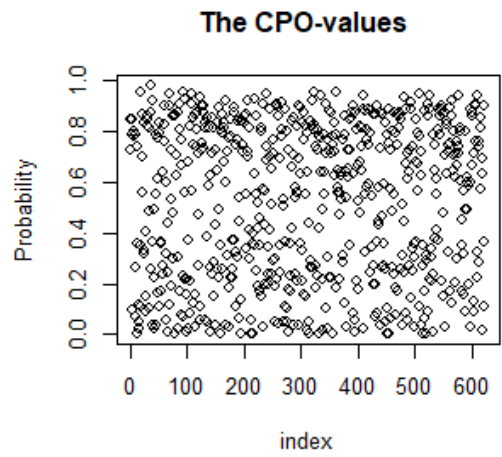
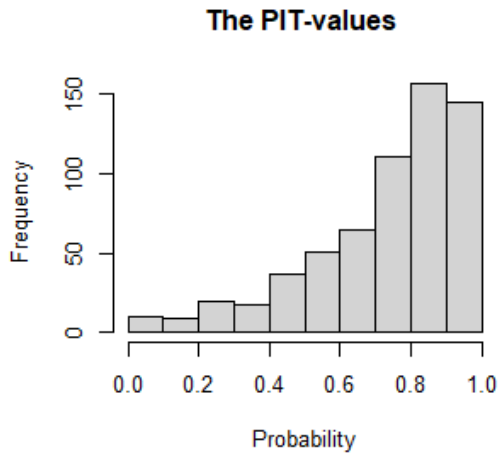
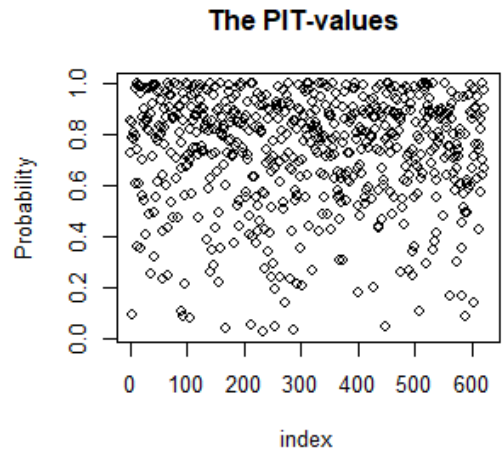
Model specifications	WAIC		
	HIV	TB	Malaria
Temperature	1319.9	311.7	15727.0
Temperature + Precipitation	1320.7	313.6	15518.7
Temperature + Precipitation + Altitude	1322.4	314.1	15548.6
Temperature + Precipitation + Altitude + Travel time to city	1314.8	313.1	15532.4
Temperature + Precipitation + Altitude + Travel time to city + Population density	1305.4	315.4	15357.0
Temperature + Precipitation + Altitude + Travel time to city + Population density + distance to water body	1299.2	317.3	15396.1
Temperature + Precipitation + Altitude + Travel time to city + Population density + Distance to water body + Access to health care	1291.3	308.2	15212.2

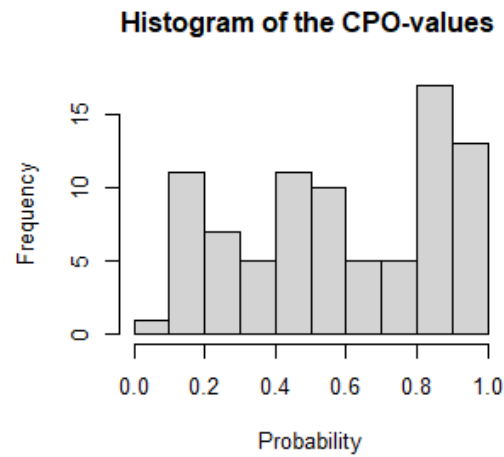
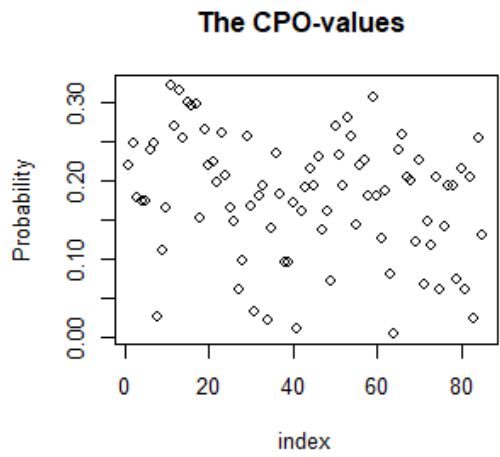
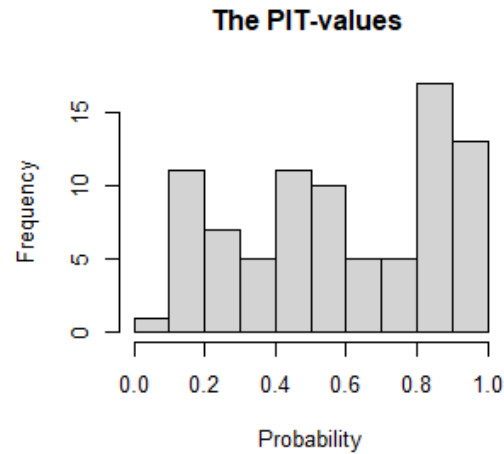
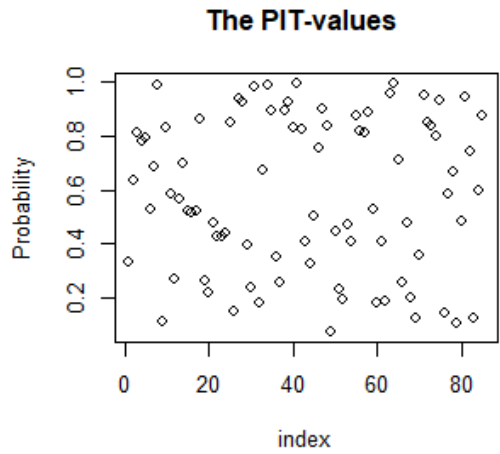
Supplementary figures

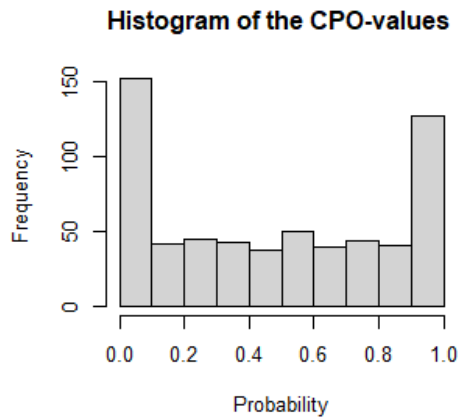
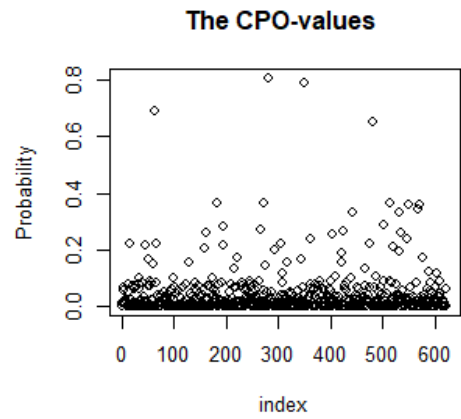
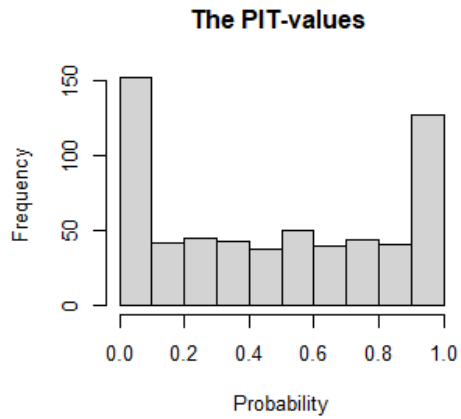
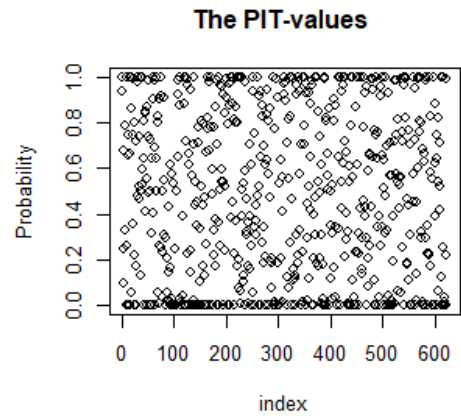












References

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2. Weiss DJ, Nelson A, Gibson H, et al. A global map of travel time to cities to assess inequalities in accessibility in 2015. *Nature* 2018; **553**(7688): 333-6.
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