**Supplementary Table 1.** Data sources and properties of the environmental co-variates used to model the probability of the spatial distribution of tick abundance and Spotted Fever Group *Rickettsia*-positive ticks in Israel.

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| **ID** | **Source** | **Type** | **Spatial Resolution** | **Time period** |
| 1 | WorldClim Global Climate  | BIO1 = Annual Mean Temperature | 1km2 | 1950-2000 |
| 2 | BIO2 = Mean Diurnal Range (Mean of monthly (max temp - min temp)) |
| 3 | BIO3 = Isothermality (BIO2/BIO7) (\* 100) |
| 4 | BIO4 = Temperature Seasonality (standard deviation \*100) |
| 5 | BIO5 = Max Temperature of Warmest Month |
| 6 | BIO6 = Min Temperature of Coldest Month |
| 7 | BIO7 = Temperature Annual Range (BIO5-BIO6) |
| 8 | BIO8 = Mean Temperature of Wettest Quarter† |
| 9 | BIO9 = Mean Temperature of Driest Quarter† |
| 10 | BIO10 = Mean Temperature of Warmest Quarter |
| 11 | BIO11 = Mean Temperature of Coldest Quarter |
| 12 | BIO12 = Annual Precipitation |
| 13 | BIO13 = Precipitation of Wettest Month |
| 14 | BIO14 = Precipitation of Driest Month |
| 15 | BIO15 = Precipitation Seasonality (Coefficient of Variation) |
| 16 | BIO16 = Precipitation of Wettest Quarter |
| 17 | BIO17 = Precipitation of Driest Quarter |
| 18 | BIO18 = Precipitation of Warmest Quarter† |
| 19 | BIO19 = Precipitation of Coldest Quarter† |
| 25 | MODIS | Normalized difference vegetation index | 250 m | 2001-2015 |
| 26 | Day - land surface temperatures | 1km2 |
| 27 | Night - land surface temperatures |
| 30 | Soil type | 1=terra rosa soil2=Mediterranean brown forest soil3=mountain rendzina soils 4=brown basaltic soils5=brown-red sandy soils6=brown-red degrading sandy soils8=alluvial soil9=brown steppe soils10=colluvial/alluvial soil11=valley rendzina soils 12=peat soils13=coastal sand dunes14=mountain hammada soils 15=brown desert skeletal soils16=desert stony land17=coarse desert alluvial18=plain hammada soils 19=Loess raw soils20=Loess-like raw soils21=Loess sandy soils22=desert sand dunes  | 1km2 |  |

 † Omitted from the ecological niche analysis; NR=Not relevant