**Table S1:** Links (url) to occurrence data and predictor variables used for ecological niche modelling.

|  |  |
| --- | --- |
|  Data  | url  |
| Occurrence data for the vector species  | http://dx.doi.org/10.5061/dryad.47v3c  |
| Climate data  | www.worldclim.org  |
| Land cover data  | http://due.esrin.esa.int/page\_globcover.php  |
| Human Zika virus occurrence  | https://doi.org/10.6084/m9.figshare.2573629.v1  |
| Temperature of warmest quarter  | www.worldclim.org  |
| Zika evidence consensus map  | Compiled according to Fig. 2, provided as supplementary asci file  |
| Dengue evidence consensus map  | https:// doi.org/10.1371/journal.pntd.0001760  |
| Gross domestic product per capita  | https://data.worldbank.org/  |
| Population density  | https://www.gideononline.com/, https://www.worldatlas.com  |

**Table S2:** GlobeCover classes

|  |  |
| --- | --- |
| Code | GlobeCover 2009 |
| 14 | Rainfed croplands |
| 30 | Mosaic vegetation (grassland/shrubland/forest) (50-70%) / cropland (20-50%) |
| 40 | Closed to open (>15%) broadleaved evergreen or semi-deciduous forest (>5m) |
| 50 | Closed (>40%) broadleaved deciduous forest (>5m)  |
| 60 | Open (15-40%) broadleaved deciduous forest/woodland (>5m) |
| 70 | Closed (>40%) needleleaved evergreen forest (>5m)  |
| 90 | Open (15-40%) needleleaved deciduous or evergreen forest (>5m)  |
| 100 | Closed to open (>15%) mixed broadleaved and needleleaved forest (>5m) |
| 110 | Mosaic forest or shrubland (50-70%) / grassland (20-50%) |
| 120 | Mosaic grassland (50-70%) / forest or shrubland (20-50%)  |
| 130 | Closed to open (>15%) (broadleaved or needleleaved, evergreen or deciduous) shrubland (<5m)  |
| 140 | Closed to open (>15%) herbaceous vegetation (grassland, savannas or lichens/mosses) |
| 150 | Sparse (<15%) vegetation  |
| 160 | Closed to open (>15%) broadleaved forest regularly flooded (semi-permanently or temporarily) - Fresh or brackish water  |
| 170 | Closed (>40%) broadleaved forest or shrubland permanently flooded - Saline or brackish water |
| 180 | Closed to open (>15%) grassland or woody vegetation on regularly flooded or waterlogged soil - Fresh, brackish or saline water  |
| 190 | Artificial surfaces and associated areas (Urban areas >50%) |
| 200 | Bare areas |
| 210 | Water bodies |
| 220 | Permanent snow and ice |



**Figure S1:** One-variable response curve for the seven variables tested as explanatory variables for the geographical distribution of the ZIKV transmission risk in South and Central America.



**Figure S2:** Results of the jack-knifing test for variable importance implemented in Maxent. Note the scale from 0-0.65 variable importance.



Figure S3: Occurrence records used for modelling the habitat suitability of the vector distribution. a) Occurrence records for *Aedes aegypti* and b) occurrence records for *Aedes albopictus*. Data taken from Kraemer et al., 2015a,b.



Figure S4: Potential vector distribution and temperature conditions suitable for ZIKV transmission. Areas in red are modelled to be suitable for at least one of the two main vectors species *Aedes aegypti* and *Aedes albopictus*. Hatched areas match the respective temperature criteria suitable for the ZIKV provided by Mordecai et al. (2017) regarding the mean temperature of warmest quarter.