Supplementary Online Content

This supplementary material has been provided by the authors to give readers additional information about their work.

| Variable	Category	Source	Web links	Comment
Anthropometric measures	Nutrition	Demographic and Health Survey (DHS)	DHS Website	
Population, 2020, UN adjusted	Demography	WorldPop, Population count	WorldPop Website.	Documentation
Shapefiles	Geography	GADM Maps and Data	GADM Website.	Documentation
Precipitation	Meteorology	National Oceanic and Atmospheric Administration (NOAA) RFE2 product	Climate Prediction Center Website	Documentation.
Mean temperature	Meteorology	Climatic Research Unit (CRU)	CRU Website.	Documentation
SPEI	Meteorology	National Center for Atmospheric Research/University Corporation Atmospheric Research (UCAR/NCAR)	UCAR/NCAR Website	Documentation
Aridity index	Meteorology	CGIAR Consortium for Spatial Information (CGIAR-CSI)		Documentation
Elevation	Topography	Elevation above the sea level (in meters) based on NASA's Shuttle RadarTopography Mission (SRTM) |	WorldPop Website	Documentation.
Slope angle	Topography	Topographic slope (in degree) based on NASA's Shuttle Radar TopographyMission (SRTM)	WorldPop Website	Documentation
EVI and NDVI	Vegetation cover	National Aeronautics and Space Administration (NASA)	NASA website	Documentation
Nighttimelights	Economic development indicator	Geospatial covariate, night-time lights in Uganda	WorldPopWebsite	Documentation
Distance to major road	Economic development indicator	Distance to nearest major road in Uganda	WorldPop Website	
Travel time to city	Economic development indicator	Travel time to city (minutes) in Uganda	WorldPop Website	Documentation

eTable 1. Sources for data included in the model. Current versions of this data can be found at the links included. SPEI: Standardized precipitation-evapotranspiration index. SPEI is rainfall minus potential evaporation and transpiration by plants describes the water balance, with negative values indicating drought potential. Index is normalized, and thus express deviations from the local long-term climatology. Enhanced vegetation index (EVI) and normalized difference vegetation index (NDVI) are satellite derived vegetation indexes; smaller values indicate less vegetation. SPEI has a multi-scale character, providing SPEI timescales between 1 and 48 months. We analyzed a 2-month lag SPEI. Aridity index is given as the ratio of mean annual precipitation to mean annual potential evapotranspiration. Values closer to zero indicate arid climates. Dataset use values from 1970-2000 period.

| Variable (N=5219)	Mean (SD)
Child factors	
Age, month	29 ± 17
Male sex*	2586 (50)
Height-for-age z scores	-1.23 ±1.48
Stunted*	1529 (29)
Weight-for-height z-scores	0.08 ± 1.15
Wasted*	189 (4)
Weight-for-age z-scores	-0.65 ± 1.13
Underweight*	570 (11)
Household factors	
Wealth index quintiles*	
Lowest	1359 (26)
Second	1112 (21)
Middle	1047 (20)
Fourth	950 (18)
Highest	751(14)
Rural residence*	4352 (83)
Maternal Factors	
Maternal education*	
Less than high school	490 (67)
High School	839 (16)
Greater than high school	242 (5)
Missing	648 (12)

*n (%)

eTable 2. Demographic characteristics of the study population. Child, household, and maternal-specific demographic characteristic for the study population.
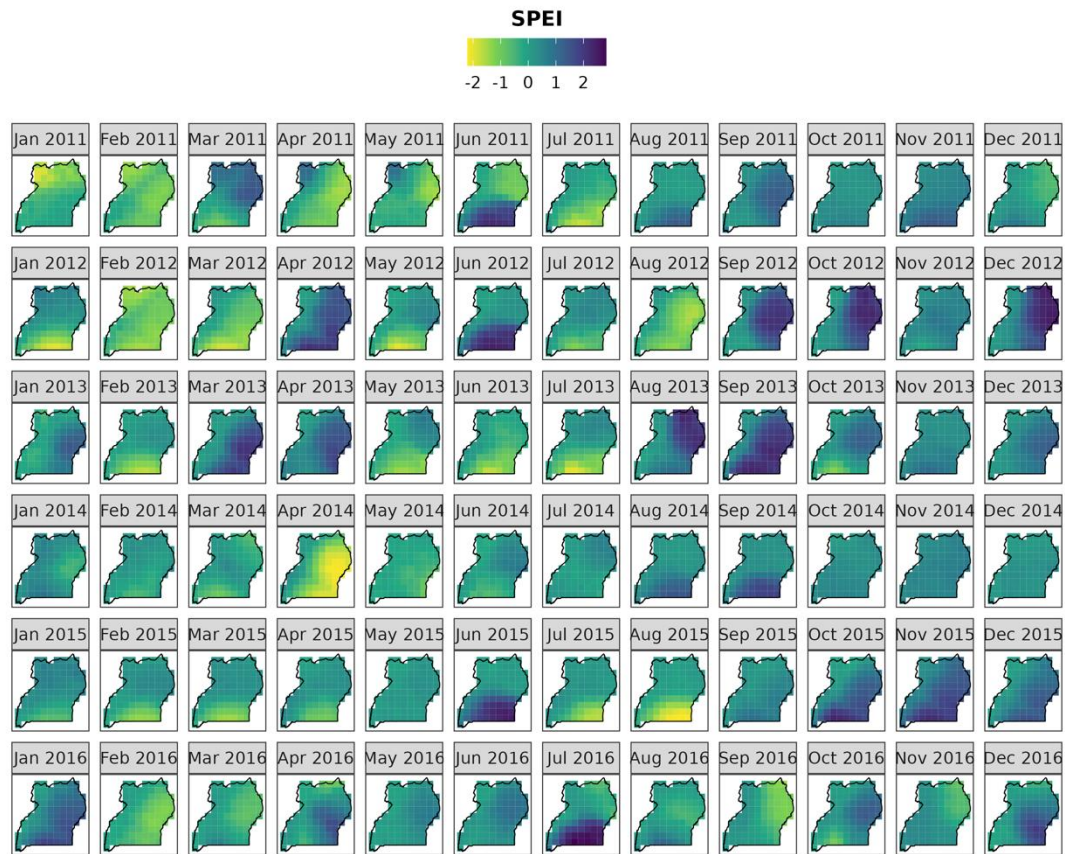
eFigure 1: Temporally changing standardized precipitation-evapotranspiration index (SPEI): Monthly measure of climatic water balance between January 2011 to December 2016.
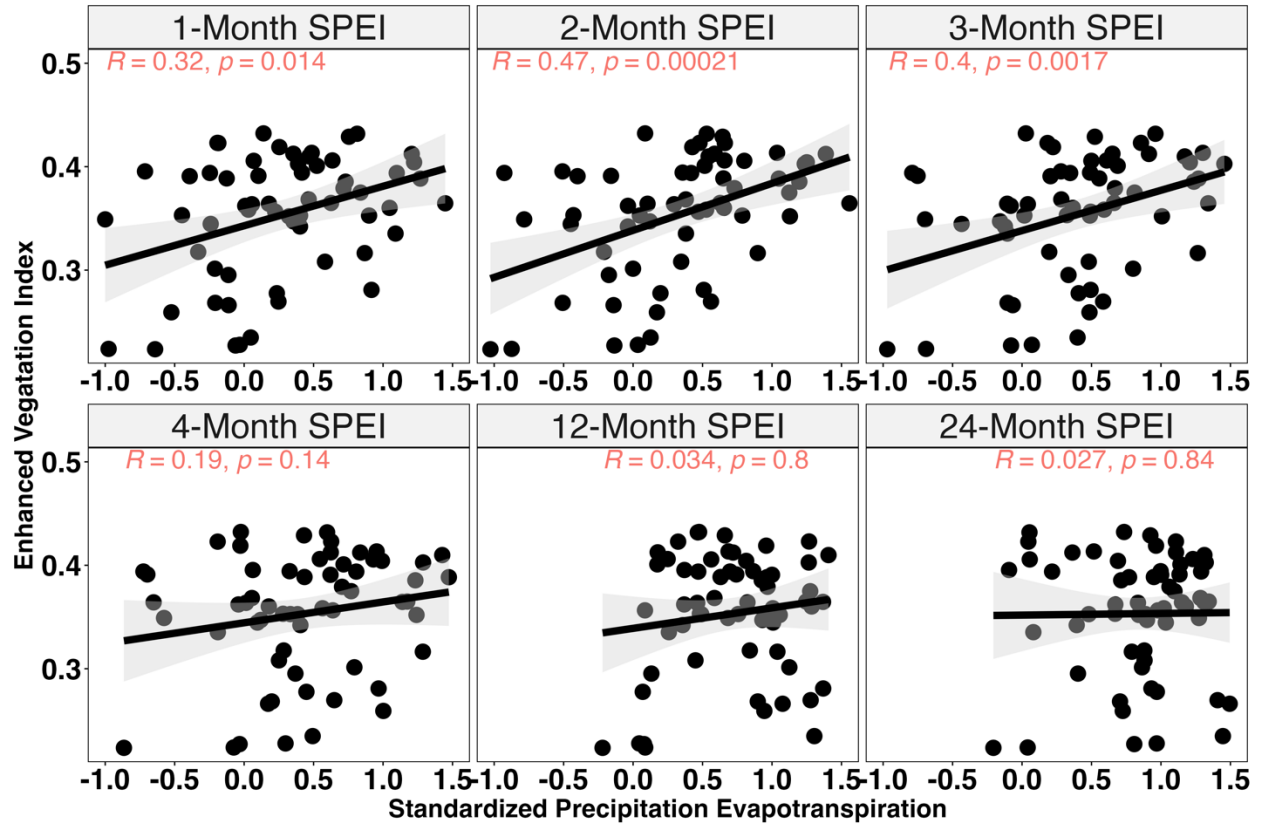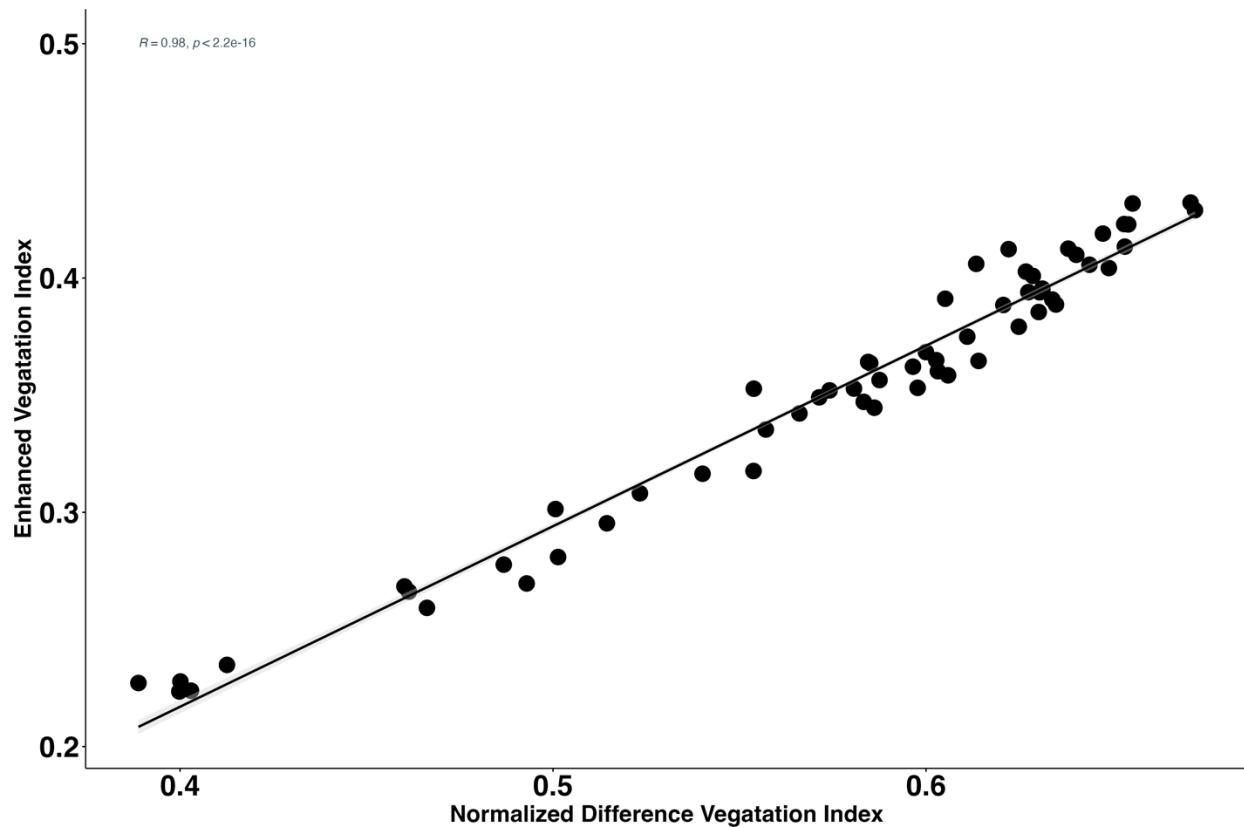
eFigure 2: Correlation between SPEI and EVI. EVI was correlated (Pearson coefficient) to the monthly 1- to 4-mo, 12-mo and 24-mo SPEI series. A 2-mo SPEI (with the highest Pearson correlation coefficient) was incorporated in our modeling.
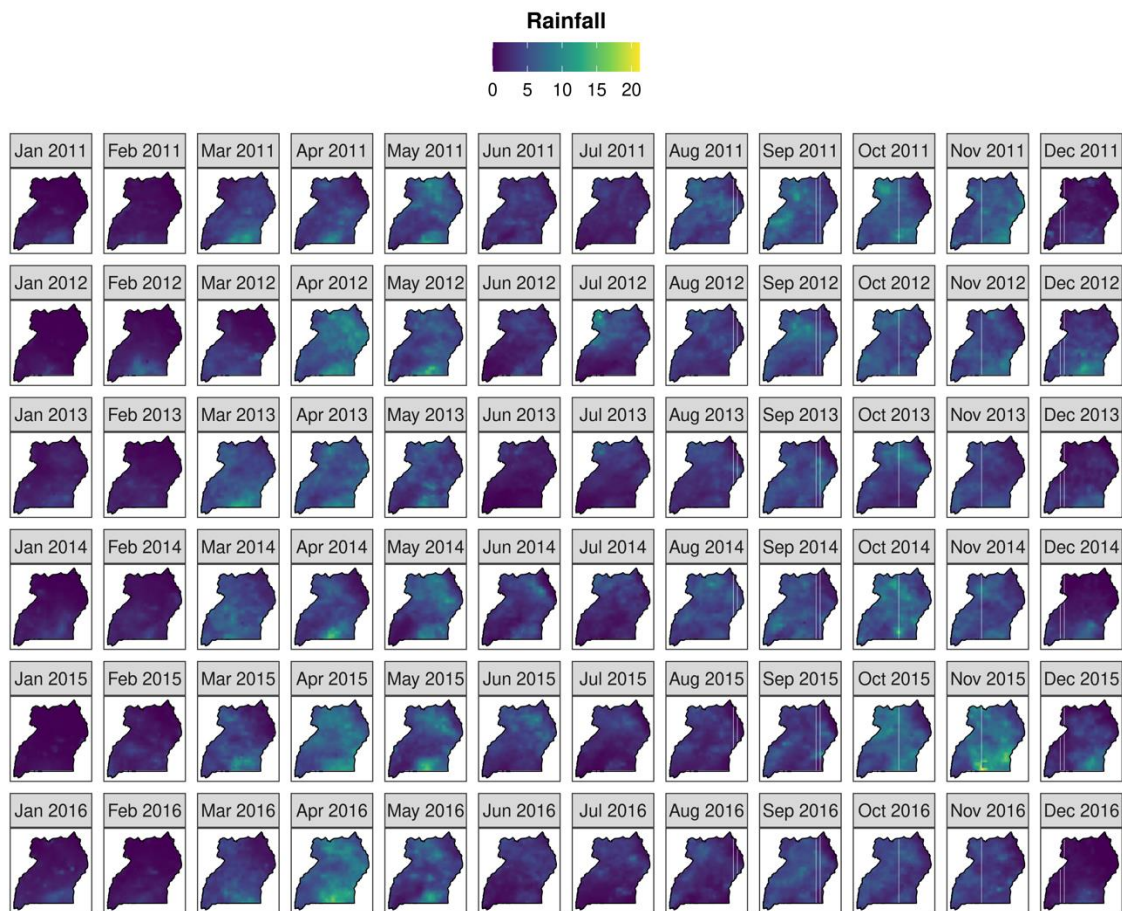
eFigure 3: Temporally changing rainfall. Monthly mean rainfall between January 2011 to December 2016. Spatial resolution of 1-km grid square.
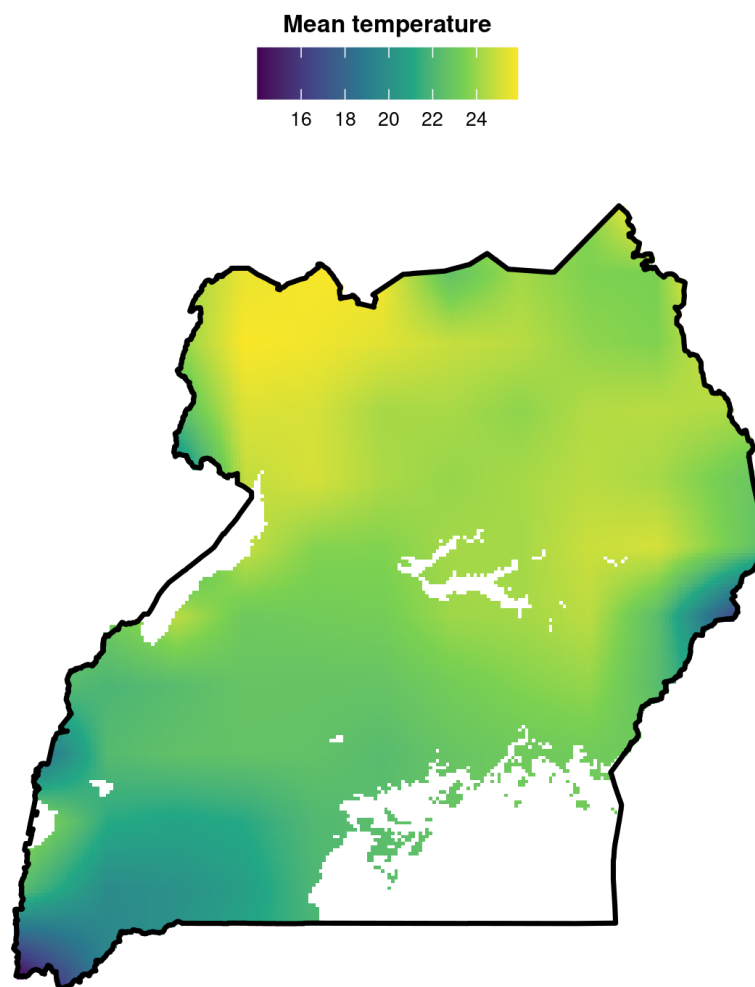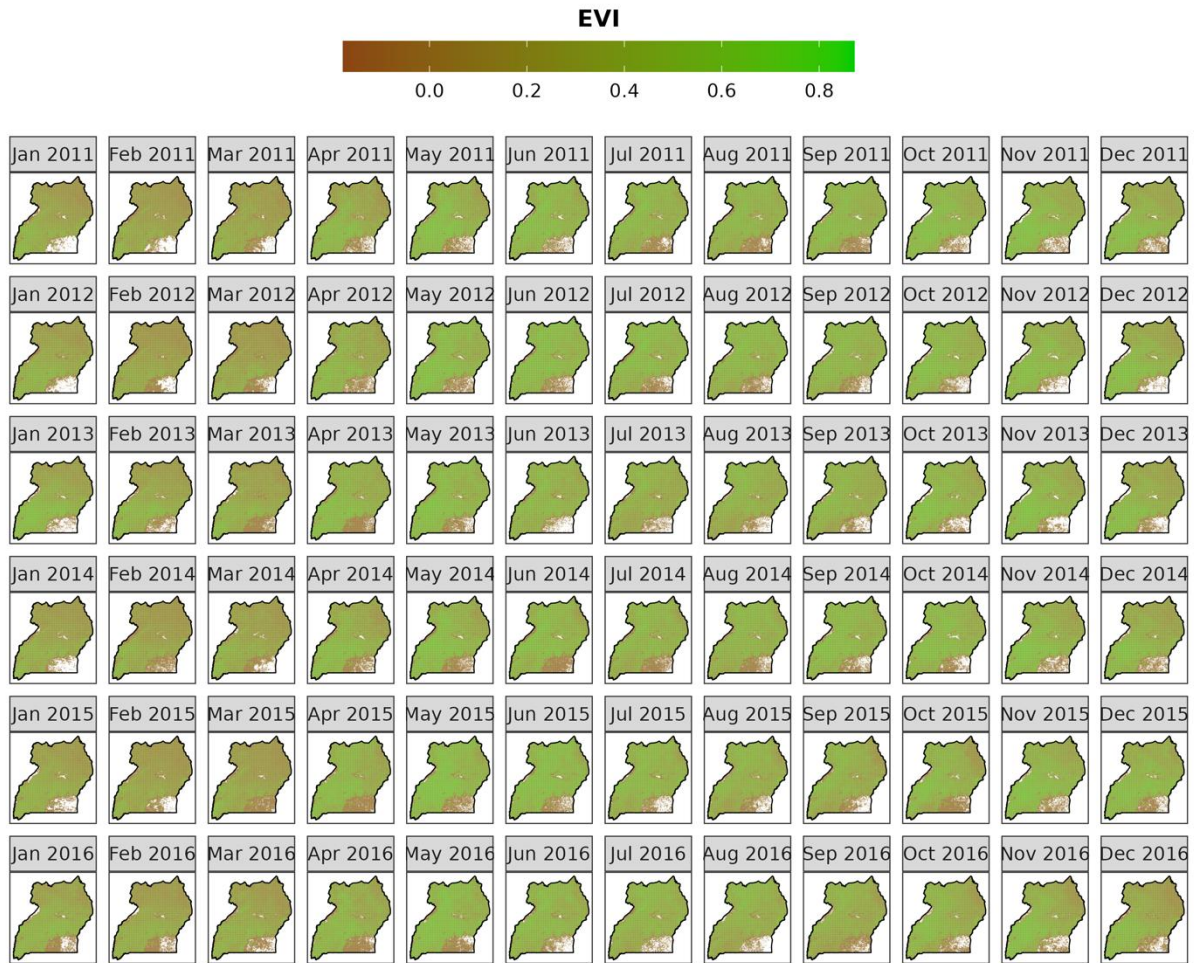
eFigure 4. Land surface mean temperature. Mean annual temperature in degrees Celsius.
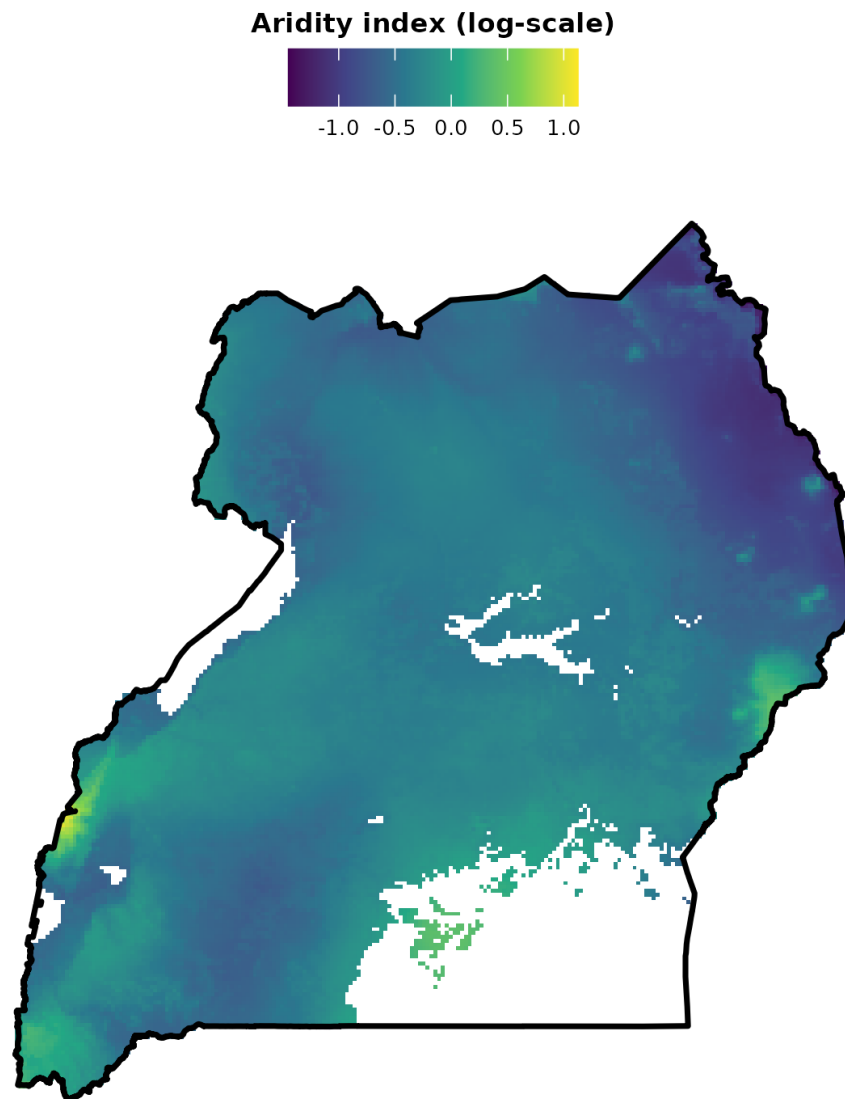
eFigure 5. Correlation between EVI and NDVI. Pearson correlation coefficient between NDVI and EVI was 98%. We included EVI in our model.
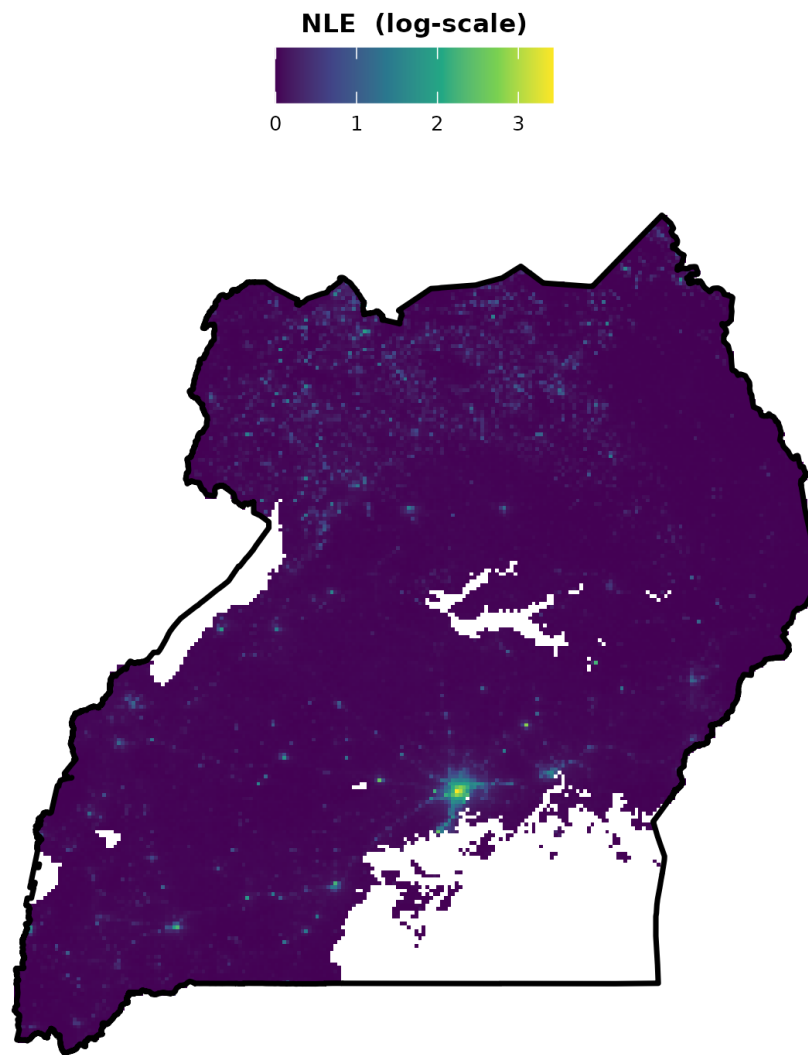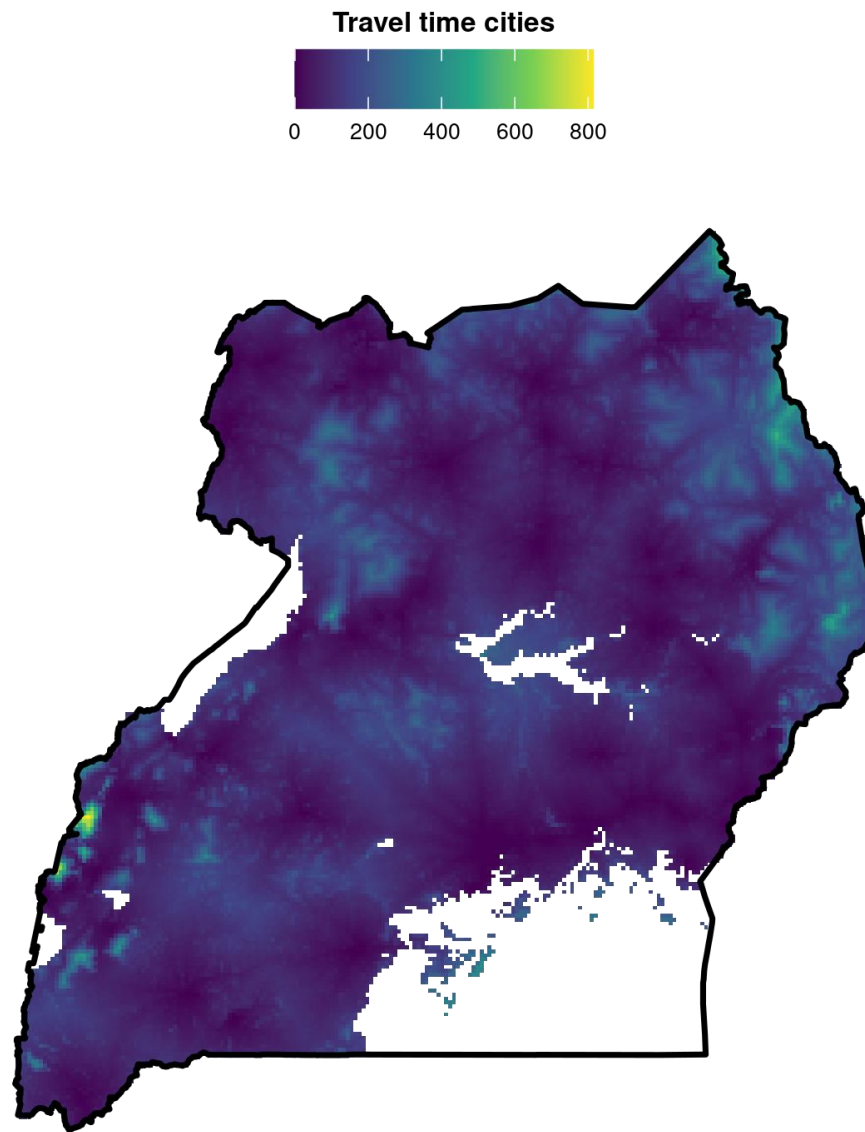
eFigure 6: Temporally changing EVI. Monthly EVI between January 2011 to December 2016. Spatial resolution of 1-km grid square.
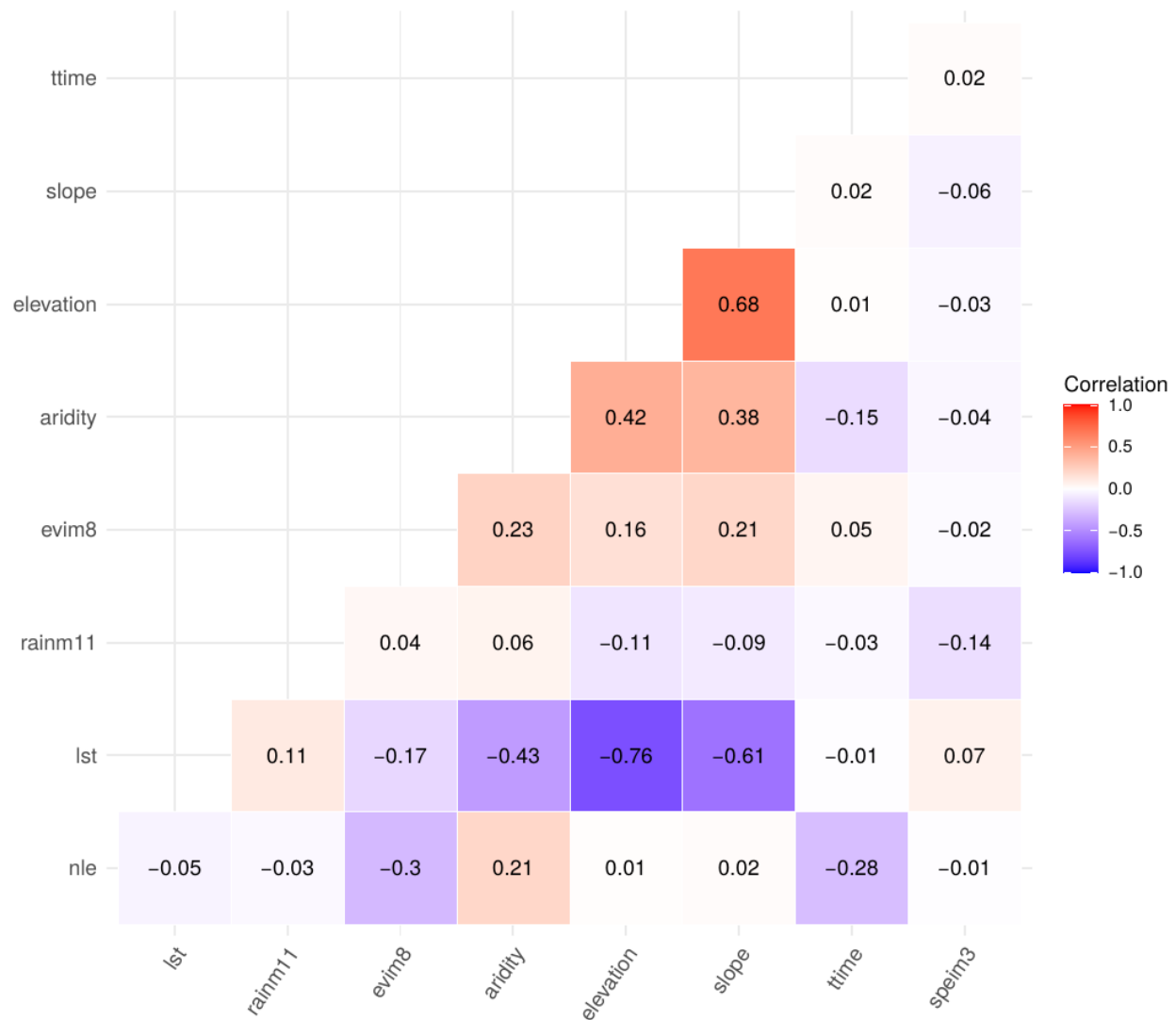
**eFigure 7. Aridity Index. Higher values depict humid regions and lower values depict arid regions.**

eFigure 8. Nighttime light emissions.

Travel time cities

0   200   400   600   800

eFigure 9. Drive time to the nearest city. Travel time (hours) to nearest city.

eFigure 10. Correlation matrix of environmental/weather factors. lst: land surface temperature (Monthly mean); rainm11: Rainfall 11 months before birth; evim8: EVI 8 months before birth; slope: Slope angle; nle: Nighttime light emission; ttime: Travel time to city; speim3: SPEI three months before birth.
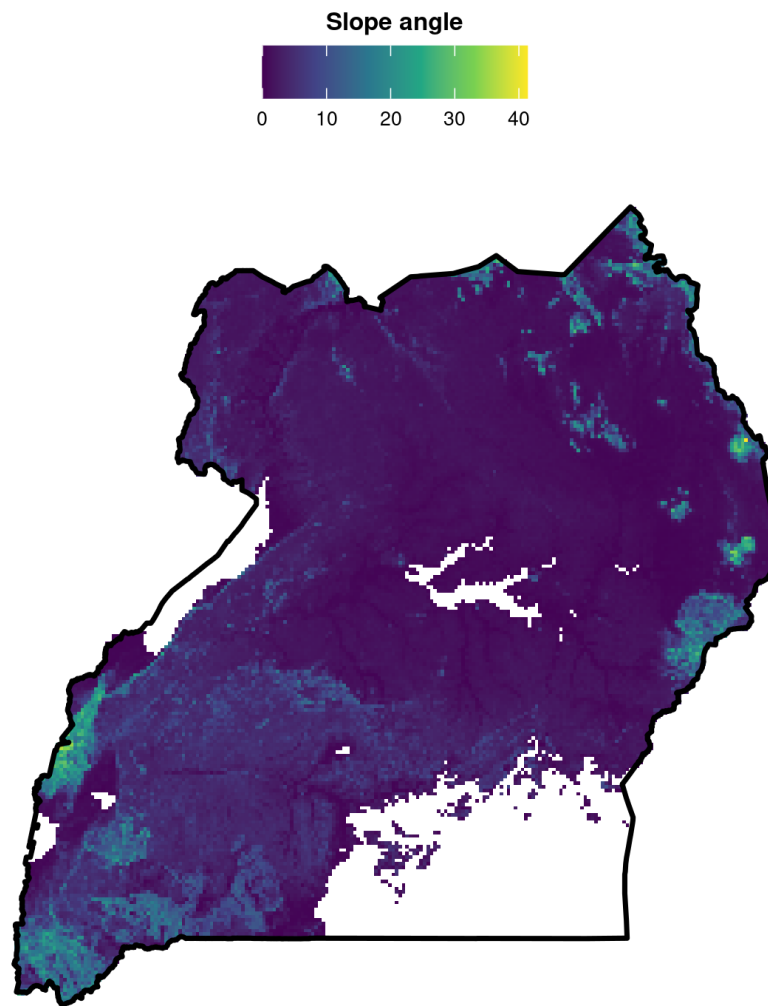
eFigure 11. Slope angle. Slope angle in degrees.