

Table 1. List of pre-processed variables obtained from WorldClim and MODIS before calculating multi-collinearity. The final variables are formatted in bold font.

Variable	Abbreviation	Remote sensing variable	Bioclimatic variable	Derived variable
V01	bio_1	N/A	Annual Mean Temperature	N/A
V02	bio_2	N/A	Mean Diurnal Range (Mean of monthly (max temp - min temp))	N/A
V03	bio_3	N/A	Isothermality (BIO2/BIO7) ($\times 100$)	N/A
V04	bio_4	N/A	Temperature Seasonality (standard deviation $\times 100$)	N/A
V05	bio_5	N/A	Max Temperature of Warmest Month	N/A
V06	bio_6	N/A	Min Temperature of Coldest Month	N/A
V07	bio_7	N/A	Temperature Annual Range (BIO5- BIO6)	N/A
V08	bio_8	N/A	Mean Temperature of Wettest Quarter	N/A
V09	bio_9	N/A	Mean Temperature of Driest Quarter	N/A
V10	bio_10	N/A	Mean Temperature of Warmest Quarter	N/A
V11	bio_11	N/A	Mean Temperature of Coldest Quarter	N/A
V12	bio_12	N/A	Annual Precipitation	N/A
V13	bio_13	N/A	Precipitation of Wettest Month	N/A
V14	bio_14	N/A	Precipitation of Driest Month	N/A
V15	bio_15	N/A	Precipitation Seasonality (Coefficient of Variation)	N/A
V16	bio_16	N/A	Precipitation of Wettest Quarter	N/A
V17	bio_17	N/A	Precipitation of Driest Quarter	N/A
V18	bio_18	N/A	Precipitation of Warmest Quarter	N/A
V19	bio_19	N/A	Precipitation of Coldest Quarter	N/A
V20	ED1514_bio1	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO1 = Annual Mean Temperature	Annual Mean of NDVI
V21	ED1514_bio2	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO2 = Mean Diurnal Range (Mean of monthly (max temp – min temp))	Mean Diurnal Range of NDVI
V22	ED1514_bio3	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO3 = Isothermality (BIO2/BIO7) ($\times 100$)	Isothermaility (BIO2/ BIO7) ($\times 100$) of NDVI
V23	ED1514_bio4	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO4 = Temperature Seasonality (standard deviation $\times 100$)	Seasonality of NDVI
V24	ED1514_bio5	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO5 = Max Temperature of Warmest Month	Max NDVI of Monthly Scores
V25	ED1514_bio6	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO6 = Min Temperature of Coldest Month	Min NDVI of Monthly Scores
V26	ED1514_bio7	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO7 = Temperature Annual Range (BIO5-BIO6)	Annual Range of NDVI
V27	ED1514_bio10	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO10 = Mean Temperature of Warmest Quarter	Mean NDVI of Warmest Quarter
V28	ED1514_bio11	MODIS V4 Band 14 Synoptic Months: Normalised Difference Vegetation Index (NDVI)	BIO11 = Mean Temperature of Coldest Quarter	Mean NDVI of Coldest Quarter
V29	ED1515_bio1	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO1 = Annual Mean Temperature	Annual Mean of EVI
V30	ED1515_bio2	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO2 = Mean Diurnal Range (Mean of monthly (max temp – min temp))	Mean Diurnal Range of EVI

Table 1 continued

Variable	Abbreviation	Remote sensing variable	Bioclimatic variable	Derived variable
V31	ED1515_bio3	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO3 = Isothermality (BIO2/BIO7) (×100)	Isothermality (BIO2/BIO7) (*100) of EVI
V32	ED1515_bio4	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO4 = Temperature Seasonality (standard deviation ×100)	Seasonality of EVI
V33	ED1515_bio5	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO5 = Max Temperature of Warmest Month	Max EVI of Monthly Scores
V34	ED1515_bio6	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO6 = Min Temperature of Coldest Month	Min EVI of Monthly Scores
V35	ED1515_bio7	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO7 = Temperature Annual Range (BIO5-BIO6)	Annual Range of EVI
V36	ED1515_bio10	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO10 = Mean Temperature of Warmest Quarter	Mean EVI of Warmest Quarter
V37	ED1515_bio11	MODIS V4 Band 15 Synoptic Months: Enhanced Vegetation Index (EVI)	BIO11 = Mean Temperature of Coldest Quarter	Mean EVI of Coldest Quarter
V38	ED15078_bio1	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO1 = Annual Mean Temperature	Annual Mean Temperature
V39	ED15078_bio2	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO2 = Mean Diurnal Range (Mean of monthly (max temp - min temp))	Mean Diurnal Range of Temperature
V40	ED15078_bio3	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO3 = Isothermality (BIO2/BIO7) (×100)	Isothermality (Bio2/Bio7) (*100)
V41	ED15078_bio4	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO4 = Temperature Seasonality (standard deviation ×100)	Seasonality
V42	ED15078_bio5	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO5 = Max Temperature of Warmest Month	Max Temperature of Warmest Month
V43	ED15078_bio6	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO6 = Min Temperature of Coldest Month	Min Temperature of Coldest Month
V44	ED15078_bio7	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO7 = Temperature Annual Range (BIO5-BIO6)	Temperature Annual Range
V45	ED15078_bio10	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO10 = Mean Temperature of Warmest Quarter	Mean Temperature of Warmest Quarter
V46	ED15078_bio11	MODIS V4 Band 07+08 Synoptic Months: day- & nighttime land surface temperature	BIO11 = Mean Temperature of Coldest Quarter	Mean Temperature of Coldest Quarter