

Table S1 List of considered predictor variables. Exp. Corr. represents expected correlation. Location is from the prior studies of forest cover loss and correlation.

Category and Name	Unit	Source	C	References	Location	Modeling unit
<i>Socioeconomic Variables</i>						
Population	Count	U.S. Census	+	[1]	Georgia	County
Population density	Count / km ²	U.S. Census	+	[2]	128 Countries	Country
Population change (%)	%	U.S. Census	+	[3]	U.S.	State
Below household poverty	Count	U.S. Census	+	[4, 5]	Asia, Africa	Southeast Asian Mekong region, local
Below household poverty change (%)	%	U.S. Census	+	[4, 5]	Asia, Africa	Southeast Asian Mekong region, local
Income per capita	\$	U.S. Census	-	[1, 6, 7]	U.S., Arkansas, Georgia	Multi-state region, County
Income per capita change (%)	%	U.S. Census	+	[1, 6, 7]	U.S., Arkansas, Georgia	Multi-state region, County
Above high school population	Count	U.S. Census	-	[2, 4]	Southeast Asia, 128 Countries	Southeast Asian Mekong region, Country
Above high school population change (%)	%	U.S. Census	-	[2, 4]	Southeast Asia, 128 Countries	Southeast Asian Mekong region, Country
<i>Ownership Variables</i>						
Forest in Federal land	%	NLCD & PAD-US	+	[5]	Africa, Asia	Local

Forest in State land	%	NLCD & PAD-US	+	[5]	Africa, Asia	Local
Forest in Local land	%	NLCD & PAD-US	+	[5]	Africa, Asia	Local
Forest in Private land	%	NLCD & PAD-US	-	[2]	128 Countries	Country
Forest in Protected land	%	NLCD & PAD-US	-	[3, 8]	U.S.,	State, Local
<i>Biophysical Variables</i>						
Forest in 1km road buffer	%	NLCD & TIGER	+	[1, 9]	India, Georgia	State, County
Forest in 5km road buffer	%	NLCD & TIGER	+	[1, 9]	India, Georgia	State, County
Forest in < 5% slope	%	NLCD & NED	+	[1, 10]	Massachusetts, Georgia	Ipswich Watershed, County
Forest in < 10% slope	%	NLCD & NED	+	[1, 10]	Massachusetts, Georgia	Ipswich Watershed, County
Forest within 5km urban buffer	%	NLCD & TIGER	+	[1, 11]	Georgia, California	County, Local
Forest within 10km urban buffer	%	NLCD & TIGER	+	[1, 11]	Georgia, California	County, Local
Forest within 5km urban (>500ha) buffer	%	NLCD & TIGER	+	[1, 11]	Georgia, California	County, Local
Forest within 10km urban (>500ha) buffer	%	NLCD & TIGER	+	[1, 11]	Georgia, California	County, Local
Agriculture cover	%	NLCD	+	[2]	128 Countries	Country
Mill Density	Count/km ²	FIA	+	[12, 13]	Uganda, U.S.	Local, Level II Ecoregion
Precipitation	inch	PRISM	-	[3]	30 countries	248 sites

Temperature	Fahrenheit	PRISM	+	[3]	30 countries	248 sites
Standardized	N/A	SPEIbase	+	[3]	30 countries	248 sites
Precipitation						
Evapotranspiration						
Index (SPEI)						
<i>Spatial neighborhood Variables</i>						
28-50	Derived variables using neighbors in a 100km range					
51-73	Derived variables using neighbors in a 300km range					
74-96	Derived variables using neighbors in a 500km range					



Figure S1 Boundaries of major regions in the U.S. from Census Topologically Integrated Geographic Encoding and Referencing (TIGER) data.

Table S2 Multicollinearity analysis among predictor variables during 1990s. Variance inflation factor (VIF), conditional index, and correlation coefficients were computed for each predictor variable and all pairs of variables.

Predictor Variables (1990s)	Name	VIF	Conditional Index	Correlation Coefficients				
				SLP5	URB10	AGR	MD	P
Slope <5% forest (%)	SLP5	1.5	1.4					
Urban (>500ha) 10 km Buffer Forest (%)	URB10	1.5	1.4	0.14				
Agriculture (%)	AGR	1.2	1.5	0.17	0.16			
Mill Density (Count/km ²)	MD	1.4	1.9	0.19	-0.16	-0.21		
Mean Precipitation	P	1.8	2.1	0.13	0.20	0.03	0.24	
Mean Temperature	T	2.6	2.3	0.37	0.15	0.01	-0.03	0.50

Table S3 Multicollinearity analysis among predictor variables during 2000s. Variance inflation factor (VIF), conditional index, and correlation coefficients were computed for each predictor variable and all pairs of variables.

Predictor Variables (2000s)	Name	VIF	Conditional Index	Correlation Coefficients				
				SLP5	URB10	AGR	MD	P
Slope <5% forest (%)	SLP5	1.4	1.2					
Urban (>500ha) 10 km Buffer Forest (%)	URB10	1.5	1.3	0.14				
Agriculture (%)	AGR	1.2	1.5	0.17	0.16			
Mill Density (Count/km ²)	MD	1.4	1.7	0.19	-0.16	-0.21		
Mean Precipitation	P	1.9	1.9	0.13	0.20	0.03	0.24	
Mean Temperature	T	2.7	2.1	0.37	0.15	0.01	-0.03	0.50

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