New 1 km Resolution Datasets of Global and Regional Risks of Tree Cover Loss

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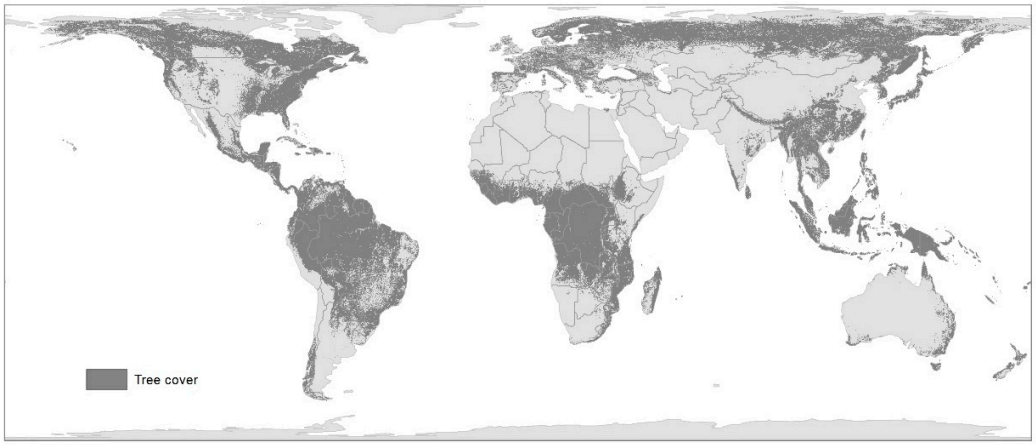

Figure S1. 1 km tree cover extent map for 2014

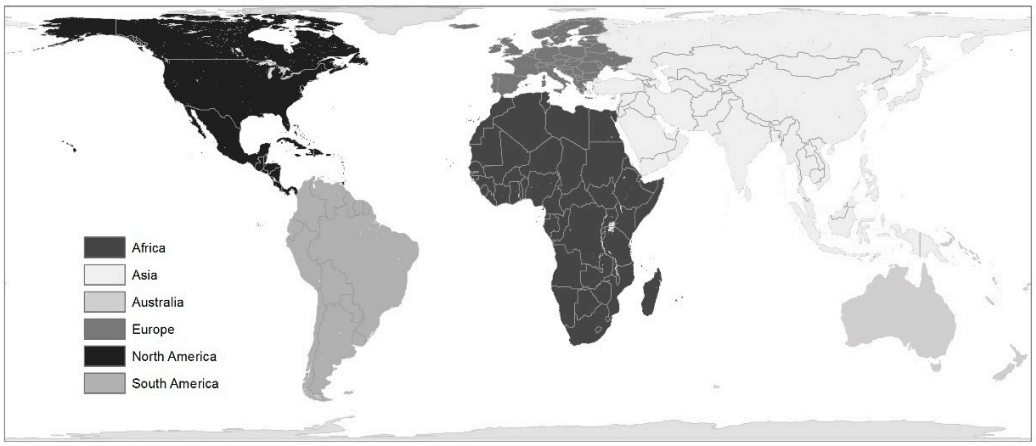

Figure S2. Six regions used for the regional scale analyses

Table S1. Test performed in the Multi-Layer perceptron (MLP) neural network model process to evaluate the importance of each variable in the model by forcing a single independent variable to be constant and generating results using all other combinations

Model	Accuracy (%)	Skill measure	Order of Influence
With all variables	80.71	0.6142	N/A
Var. 1 constant	80.50	0.6099	12
Var. 2 constant	80.52	0.6104	13
Var. 3 constant	80.14	0.6027	7
Var. 4 constant	80.36	0.6073	9
Var. 5 constant	77.98	0.5597	1 (most influential)
Var. 6 constant	79.96	0.5993	4
Var. 7 constant	80.65	0.6129	15
Var. 8 constant	80.46	0.6092	11
Var. 9 constant	80.81	0.6163	18 (least influential)
Var. 10 constant	80.70	0.6140	17
Var. 11 constant	78.34	0.5669	2
Var. 12 constant	79.81	0.5962	3
Var. 13 constant	80.09	0.6017	5
Var. 14 constant	80.36	0.6072	8
Var. 15 constant	80.66	0.6131	16
Var. 16 constant	80.61	0.6122	14
Var. 17 constant	80.13	0.6026	6
Var. 18 constant	80.40	0.6080	10

Table S2. Test performed in the Multi-Layer perceptron (MLP) neural network model process to highlight the interactions that exist among the variables by forcing all independent variables except one to be constant

Model	Accuracy (%)	Skill measure
With all variables	80.71	0.6142
All constant but var. 1	50.13	0.0025
All constant but var. 2	50.13	0.0025
All constant but var. 3	50.05	0.0010
All constant but var. 4	50.13	0.0025
All constant but var. 5	67.55	0.3511
All constant but var. 6	51.59	0.0318
All constant but var. 7	50.13	0.0025
All constant but var. 8	50.13	0.0025
All constant but var. 9	50.13	0.0025
All constant but var. 10	50.13	0.0025
All constant but var. 11	66.81	0.3362
All constant but var. 12	50.63	0.0126
All constant but var. 13	50.13	0.0025
All constant but var. 14	51.13	0.0226
All constant but var. 15	50.13	0.0025
All constant but var. 16	50.13	0.0025
All constant but var. 17	61.94	0.2389
All constant but var. 18	50.13	0.0025

Table S3. Backwards elimination stepwise test performed in the Multi-Layer perceptron (MLP) neural network model process to assess the impact of each variable on the overall accuracy of the model; example from the global model

Model	Variables included	Accuracy (%)	Skill measure
With all variables	All variables	80.71	0.6142
Step 1: var.[9] constant	[1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18]	80.81	0.6163
Step 2: var.[9,10] constant	[1,2,3,4,5,6,7,8,11,12,13,14,15,16,17,18]	80.79	0.6158
Step 3: var.[9,10,15] constant	[1,2,3,4,5,6,7,8,11,12,13,14,16,17,18]	80.72	0.6145
Step 4: var.[9,10,15,7] constant	[1,2,3,4,5,6,8,11,12,13,14,16,17,18]	80.58	0.6116
Step 5: var.[9,10,15,7,16] constant	[1,2,3,4,5,6,8,11,12,13,14,17,18]	80.53	0.6106
Step 6: var.[9,10,15,7,16,1] constant	[2,3,4,5,6,8,11,12,13,14,17,18]	80.38	0.6077
Step 7: var.[9,10,15,7,16,1,17] constant	[2,3,4,5,6,8,11,12,13,14,18]	80.18	0.6035
Step 8: var.[9,10,15,7,16,1,17,18] constant	[2,3,4,5,6,8,11,12,13,14]	79.90	0.5981
Step 9: var.[9,10,15,7,16,1,17,18,14] constant	[2,3,4,5,6,8,11,12,13]	79.92	0.5984
Step 10: var.[9,10,15,7,16,1,17,18,14,4] constant	[2,3,5,6,8,11,12,13]	80.12	0.6023
Step 11: var.[9,10,15,7,16,1,17,18,14,4,8] constant	[2,3,5,6,11,12,13]	79.92	0.5984
Step 12: var.[9,10,15,7,16,1,17,18,14,4,8,2] constant	[3,5,6,11,12,13]	79.41	0.5881
Step 13: var.[9,10,15,7,16,1,17,18,14,4,8,2,13] constant	[3,5,6,11,12]	78.85	0.5770
Step 14: var.[9,10,15,7,16,1,17,18,14,4,8,2,13,3] constant	[5,6,11,12]	78.14	0.5627
Step 15: var.[9,10,15,7,16,1,17,18,14,4,8,2,13,3,12] constant	[5,6,11]	77.10	0.5419

Step 16: var.[9,10,15,7,16,1,17,18,14,4,8,2,13,3,12,6] constant	[5,11]	75.88	0.5175
Step 17: var.[9,10,15,7,16,1,17,18,14,4,8,2,13,3,12,6,11] constant	[5]	67.55	0.3511

Table S4. Driver variables (including both quantitative variables and the Normalized Likelihood (NL) of qualitative variables) for the six regional analyses, ordered by relative importance

Relative Importance	Africa	Australia	Asia	Europe	N America	S America
1	AGB	precipitation	ecoregions (NL)	countries (NL)	biomes (NL)	AGB
2	countries (NL)	slope	distance to airports	mean temperature	ecoregions (NL)	slope
3	Human Influence Index	mean temperature	distance to trails	slope	countries (NL)	precipitation
4	precipitation	protected area (NL)	crop suitability	irrigation area	AGB	distance to roads
5	distance to trails	distance to trails	distance to railroads	crop suitability	distance to roads	opportunity cost
6	protected area (NL)	biomes (NL)	AGB	AGB	distance to railroads	ecoregions (NL)
7	distance to railroads	AGB	slope	precipitation	crop suitability	protected area (NL)
8	slope	elevation	mean temperature	World population 2000	elevation	countries (NL)
9	elevation	crop suitability	elevation	Human Influence Index	precipitation	soil drainage (NL)

10	mean temperature	irrigation area	World population 2000	distance to airports	mean temperature	mean temperature
11	crop suitability	Human Influence Index	countries (NL)	distance to trails	distance to airports	crop suitability
12	ecoregions (NL)	soil drainage (NL)	distance to urban areas	soil drainage (NL)	irrigation area	soil pH (NL)
13	distance to airports	soil texture (NL)	irrigation area	biomes (NL)	soil texture (NL)	biomes (NL)
14	biomes (NL)	countries (NL)	soil drainage (NL)	ecoregions (NL)	soil pH (NL)	distance to urban areas
15	irrigation area	ecoregions (NL)	precipitation	elevation	slope	elevation
16	World population 2000	distance to roads	Human Influence Index	opportunity cost	distance to urban areas	soil depth (NL)
17	soil pH (NL)	distance to urban areas		distance to railroads	Human Influence Index	distance to airports
18	soil drainage (NL)			soil texture (NL)	soil drainage (NL)	
19				distance to roads		
20				soil depth (NL)		
21				distance to urban areas		
22				soil pH (NL)		
23				protected area (NL)		