Supplementary Materials

Data processing and variable selection

Variables used in each analysis were selected for theoretical reasons (Tables S1B, S2B), building on research on drivers of deforestation at the global scale (Geist & Lambin 2002; DeFries et al. 2010) and the different restoration methods included in the Bonn Challenge (Dave et al. 2017). Two trade variables correlated with deforestation rates (net agricultural trade and percent of production exported) were calculated following the method of DeFries et al. (2010). We also developed a composite variable, Permanent Crops and Plantations (Table S1), which combined the area of permanent crops (e.g., agroforestry and other tree crops) with the area of tree plantations (for timber or pulp). Although these two land covers are distinct in terms of crop species and dynamics, they are both acceptable forms of forest landscape restoration (Dave et al. 2017). Combining these two variables permitted comparing countries with distinct agricultural economies (e.g., Cameroon and Korea), but similar existing progress towards restoration goals.

Infrequent missing values in selected variables were either replaced with recent data <6 years old, or with published online data. If selected variables had pairwise correlations >0.8, theoretical considerations were used to omit one from statistical analyses (Table S1). However, preliminary analyses indicated that selecting the other variable led to largely similar model behavior, with similar interpretation. For example, the development variable pair rural electrification and unsafe water mortality had similar effects in both the regression and decision tree analyses, as did other variable pairs (land area and forest area, for example, and human development index and the log of GDP, as another example).

Data were taken from the best available source for country-level data over time. In the case of several development variables (e.g., population in poverty, unsafe water mortality), data were only intermittently available in the past. We included another variable, change over time in the Human Development Index, to examine if changes in development variables over time were predictive of restoration commitment area. Country-level reporting was used to derive FAO agriculture and FRA forest areas, and associated rates of deforestation and agricultural expansion. Data from country-level reporting can contain bias and

inconsistencies over time (e.g., Grainger 2008), but was the best available option. We would have preferred to conduct this analysis with globally consistent remote-sensing data on land cover change (change in the area of forests and agriculture) that extended from 2000 to 2015, but in our assessment, current global products are not up to this task. For example, consistent satellite data on net forest cover change exists (Hansen et al. 2013; Sexton et al. 2015), but underestimates tree cover in arid countries (Bastin et al. 2017) and was not available past 2012.

Regression model diagnostics

We first fit a regression model using all selected variables (18 in all) and conducted model diagnostics using the olsrr package in R 3.5.1. This all-variable model had acceptable model diagnostics for residual normality (Shapiro-Wilk test, p=0.3) and for heteroskedasticity (Breusch-Pagan test, p=0.15), but variable inflation factors and conditions were unacceptably high. We then conducted a forward and backward stepwise variable selection using AIC as the criteria (MASS::stepAIC function in R). The resulting final model output from the stepwise process had four variables, acceptable diagnostics for residual normality (Shapiro-Wilk test, p=0.32), and acceptably low variable inflation factors and condition indices (Table S3). However, the final stepwise model had heteroskedasticity in its residuals (Breusch-Pagan test, p=0.02), a common issue with country-level data. To correct our biased standard error (SE) estimates, we used the lmtest and sandwich packages in R to calculate robust SEs (Zeileis 2004) for the final stepwise model using a MacKinnon and White (1985) method for small samples (HC1). These corrected standard errors are reported in Figure 1B.

Risk indicator selection

We assessed potential progress in achieving restoration commitments using twelve indicators, grouped into three broad categories: 1) commitment feasibility, 2) the likelihood of maintaining restored forests (i.e., deforestation drivers), and 3) a record of effective governance (see Table S2 for details). Commitment feasibility indicators included the absolute size of the restoration commitment and the size of the commitment as a percentage of country area, both of which directly measure the size of the pledge made (an indicator of relative difficulty of completion). Two other feasibility indicators measure the

degree of land cover change that would be required to meet the commitments. The first is the plantation gap, or the difference between the commitment area and the current area of tree plantations and permanent crops. The second is the percentage of agriculture or forest area (whichever is lower) that would be affected by the restoration commitment, an approximate metric of the land-use change required to meet the commitment. Indicators of the likelihood of maintaining restored forests included rates of forest loss, agricultural expansion, total population growth rate (Geist & Lambin 2002), and, as a metric of macroeconomic stability, international aid as a proportion of GDP (Bulíř & Hamann 2008). We would expect restored forests to be less likely to be maintained where forest loss, population growth, and agricultural expansion are high. Similarly, we would expect that long-term investment and maintenance of restoration would be more common in countries with long-term stability in government funding (and thus, low international aid relative to GDP).

Finally, we expected that a country's ability to meet its restoration commitments would be reflected in its ability to meet past sustainable development commitments—to show a record of effective governance. We define effective governance as how well a government achieves a stated goal, or how well it prevents a systemic challenge, like corruption. To provide a thorough examination of a country's record of effective governance, we selected a diverse set of indicators that included water-related mortality (Hutton & Chase 2016), rural electrification (Cook 2011), the availability of physicians per person (Robinson & Wharrad 2001), and the sum of two common indices of corruption and effective government (Hamilton & Hammer 2018; Table S1). Collectively, these indicators show a country's progress towards several sustainable development goals, including goal 6 (clean water and sanitation; water-related mortality), goal 7 (affordable and clean energy; rural electrification), goal 3 (health and well-being; physicians per person), and goal 16 (peace, justice, and strong institutions; corruption score). We selected these four sustainable development goals because A) they were easily measurable with available data, B) they were directly tied to the effectiveness of government institutions and/or land management, and C) they were correlated with several other development goals related to poverty and education.

Figure S1: Inset from Figure 3, showing the proportion of land area potentially occupied by restoration commitments plotted against the absolute area of restoration commitments in millions of hectares, for a subset of countries. Countries are labeled by World Bank code and region (see Table S7). The black lines mark a commitment of 10% of a country's land area (x) and 2 million ha (y), respectively.

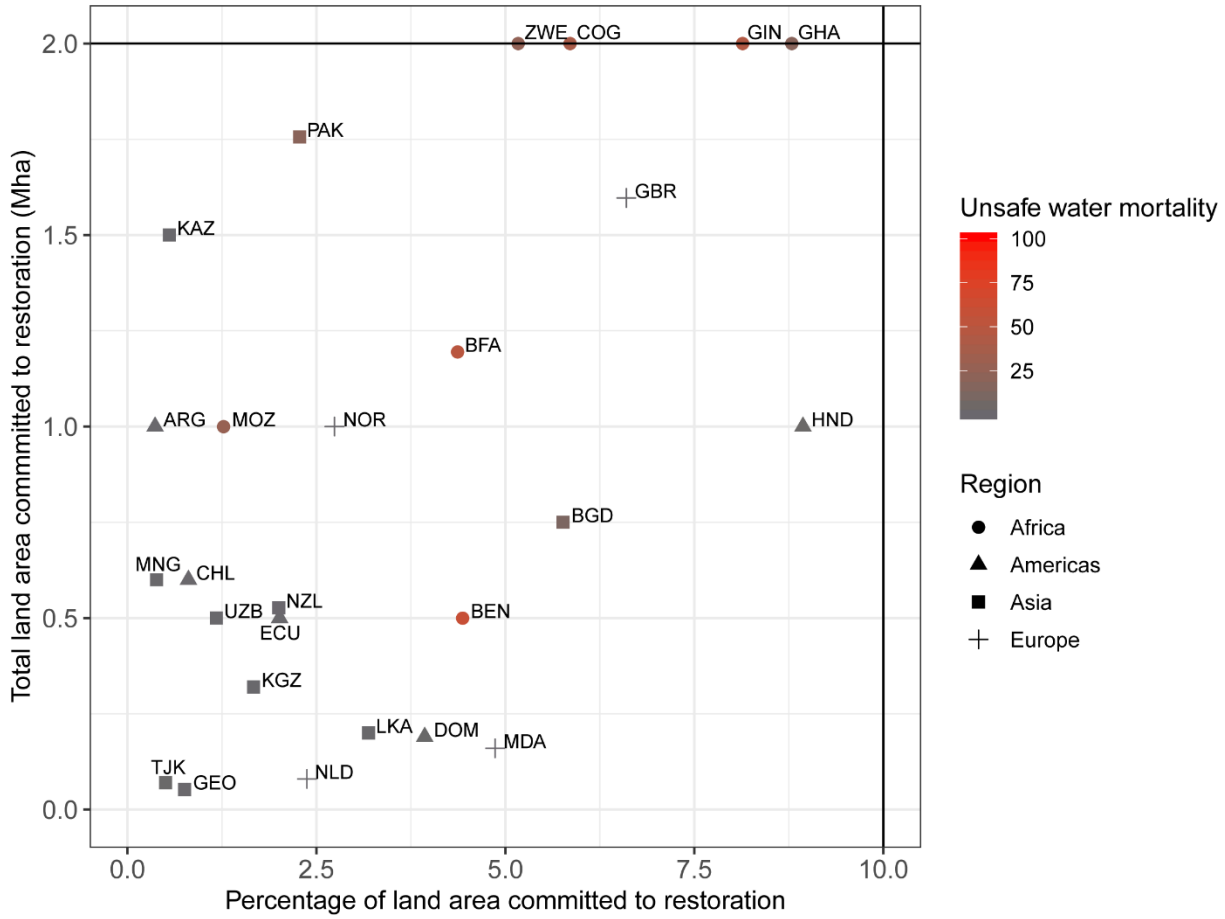

Figure S2: Available area for restoration by country (the area of agricultural activities in 2015), plotted against a metric of development status for that country (the logarithm of GDP per capita). The agricultural area available for restoration is uncorrelated with development status (r=0.004, p=0.98), but larger restoration commitments (orange shades) are more common in countries with large agricultural areas (see Figure 2) . The x and y axes are scaled in logarithmic scale (base 10), and the black lines represent the median values of agricultural area and development status, respectively. Countries are labeled by World Bank code and region (see Table S7).

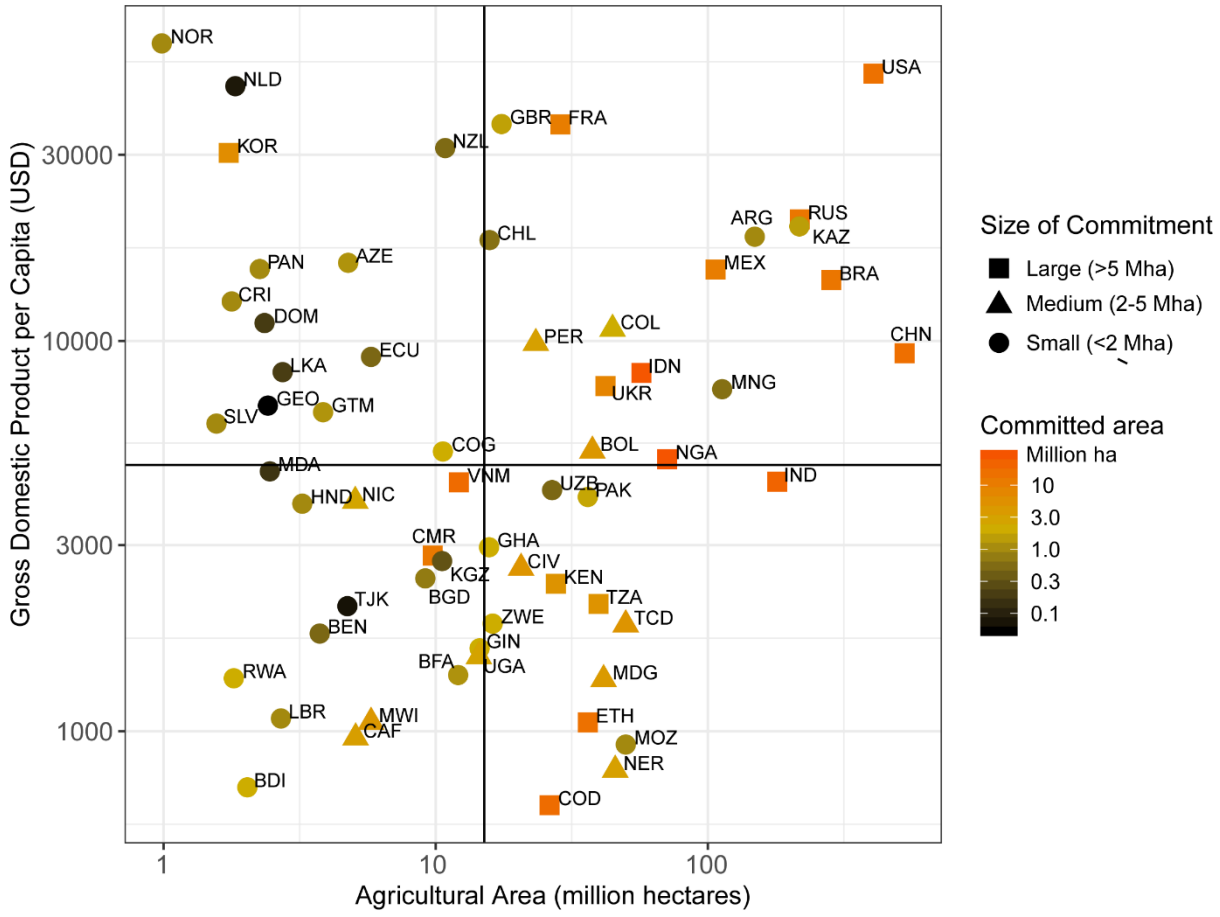

Table S1 (part A): Detailed descriptions for the 18 independent variables used to predict the size of restoration commitments (multiple linear regression and regression tree analyses). The table is broken into two parts: Part A contains names, units, and descriptions of variables, while Part B contains the data sources and rationales for inclusion in the analysis. The last six variables (italicized) were excluded from the analysis (see supplemental text for details).

Variable	**Units**	**Description**
Forest Area	Hectares	Forest Area, 2010
Change in Forest Area	Percent of land area	Change in forest area, 2000-2010
Agricultural Area	Hectares	Agricultural Area, 2010
Change in Ag. Area	Percent of land area	Change in agricultural area, 2000-2010
Permanent Crops and Plantations (PCP)	Hectares	Sum, area of tree plantations and permanent crops, 2010
Change in PCP Area	Percent of land area	Change in area of tree plantations and permanent crops, 2000-2010
Log(GDP, per capita)	Log($ (USD)/person)	Log of Gross Domestic Product (GDP) per capita in 2010, PPP (current international $)
GDP growth	Percent change	Mean % increase in GDP, 2000-2010
Unsafe Water Mortality	people/100,000 people	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene
Population in Poverty, %	Percent of population	Poverty headcount ratio at $1.90 a day (2011 PPP)
Change in Human Development Index	Percent change	Percent change in HD Index over time, 2000-2010.
Population Growth	Percent change	Population growth (mean annual percentage change, 2000-2010)
Rural Population	Percent of total population	Population proportion in rural areas, 2010.
Rural Population Shift	Percent change	Change in population proportion in rural areas, 2000-2010.
Population Density	people/km^2 land area	Population density, 2010
Net Agricultural Trade	$ (USD)	Net agricultural trade, exports-imports
Agriculture Exported, %	Percentage	Percent of Agriculture Exported
Water Stress	Percentage	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
Country Land Area	*Hectares*	*Land area excluding inland waters*
Rural Electrification	*Percent of rural population*	*Access to electricity, rural*
Urban Population Growth	*Percent change*	*Urban population growth (mean annual percentage change, 2000-2010)*
Rural Pop. Growth	*Percent change*	*Rural population growth (mean annual percentage change, 2000-2010)*
Agricultural employment	*Percent of total employment*	*Percent employment in agricultural sector (i.e., agriculture, hunting, forestry and fishing)*
Youth literacy	*Percent of people*	*Literacy rate, youth total (ages 15-24)*
Human Dev. Index (HDI)	*Metric (unit-less)*	*Index of Human Development, 2010; composite metric*

Table S1 (part B): Detailed descriptions for the 18 independent variables used to predict the size of restoration commitments (multiple linear regression and regression tree analyses). The table is broken into two parts: Part A contains names, units, and descriptions of variables, while Part B contains the data sources and rationale for inclusion in the analysis. The last six variables (italicized) were excluded from the analysis (see supplemental text for details).

Variable	**Source**	**Rationale**
Forest Area	(FAO 2015)	Restoration opportunity proxy (degraded forest)
Change in Forest Area	(FAO 2015)	Restoration proxy (forest cover gain)
Agricultural Area	(FAO 2019)	Restoration opportunity proxy (agroforestry)
Change in Ag. Area	(FAO 2019)	Restoration opportunity proxy (farmland conversion to forests)
Permanent Crops and Plantations (PCP)	(FAO 2015, 2019)	Potential restored area (timber plantations and permanent tree crops)
Change in PCP Area	(FAO 2015, 2019)	Growth in potentially restored areas (if plantations and tree crops were established in nonforested areas)
Log(GDP, per capita)	(World Bank 2019)	Indicator of development status, correlated with rural electrification (r=0.82).
GDP growth	(World Bank 2019)	Indicator of recent economic conditions
Unsafe Water Mortality	(World Bank 2019)	Indicator of development status, sustainable development progress
Population in Poverty, %	(World Bank 2019)	Indicator of development status, sustainable development progress
Change in Human Development Index	(Kovacevic et al. 2018)	Indicator of development status, sustainable development progress
Population Growth	(World Bank 2019)	Potential change in resources per person
Rural Population, %	(World Bank 2019)	Proxy for agricultural pressure, correlated with agricultural employment (r=0.85)
Rural Population Shift	(World Bank 2019)	Proxy for change in agricultural pressure
Population Density	(World Bank 2019)	Proxy for farm size, urban density
Net Agricultural Trade	(FAO 2019)	Predictor of deforestation, calculated following DeFries et al. (2010)
Agriculture Exported, %	(FAO 2019)	Predictor of deforestation, calculated following DeFries et al. (2010)
Water Stress	(World Bank 2019)	Proxy for aridity and challenges in establishing forests
Country Land Area	(FAO 2019)	*Highly correlated with forest area (r=0.93)*
Rural Electrification	(World Bank 2019)	*Highly correlated with unsafe water mortality (r=0.93)*
Urban Population Growth	(World Bank 2019)	*Correlated with total population growth (r=0.89).*
Rural Pop. Growth	*(World Bank 2019)*	*Correlated with total population growth (r=0.8).*
Agricultural employment	(World Bank 2019)	*Correlated with percent rural population (r=0.85).*
Youth literacy	(World Bank 2019)	*Highly correlated with unsafe water mortality (r=0.91).*
Human Dev. Index (HDI)	(Kovacevic et al. 2018)	*Highly correlated with the log of GDP per capita (r=0.96).*

Table S2 (Part A): Detailed descriptions for the 12 risk indicators used to predict country progress towards restoration pledges (Figure 6). The table is broken into two parts: Part A contains names, units, and descriptions, while Part B contains the data sources and rationale for selection (see supplemental text for details).

Variable	Units	Description
Restoration Pledge (area)	Hectares (millions)	Area pledged before 2019 to either Bonn Challenge or National Restoration Targets (the higher of two pledges).
Restoration Pledge (%)	Percent of land area	Percent of country occupied by restoration pledge.
Plantation Gap	Percent of land area	Difference between the restoration commitment and the 2015 area of permanent crops and plantations (PCP).
Committed Land Cover	Percent of land area	Agricultural area or forest area (whichever is lower) that would be affected by the restoration commitment.
Forest Loss	Percent of land area	Net rate of loss of forest (2000-2015), as a percentage of land area.
Agricultural Expansion	Percent of land area	Rate of expansion of agricultural area (2000-2015), as a percentage of land area.
Population Growth	Percent Change	Population growth (annual percentage change, 2016-2017).
International Aid (% GDP)	Percent of Gross Domestic Product	International aid as a proportion of GDP, 2017.
Unsafe Water-related Mortality	Mortality/100,000 people	Mortality per 100,000 related to unsafe water, sanitation, and/or hygiene, 2016-2017.
Unelectrified Population, Rural	Percent of population	Percent of rural population without access to electricity (100-percent with rural electrification), 2017.
People per Physician	100 people	Number of 100 people per doctor (calculated from physician per 1000 people), 2017.
Corruption Score	Score from -4 to 4.	The sum of two corruption indices (Government Effectiveness and Control of Corruption); multiplied by -1 for interpretation.

Table S2 (Part B): Detailed descriptions for the 12 risk indicators used to predict country progress towards restoration pledges (Figure 6). The table is broken into two parts: Part A contains names, units, and descriptions, while Part B contains the data sources and rationale for selection (see supplemental text for details).

Variable	Source	Indicator type	Rationale
Restoration Pledge (area)		Feasibility	Absolute size of country commitment.
Restoration Pledge (%)		Feasibility	Proportional size of country commitment.
Plantation Gap		Feasibility	Progress needed to achieve pledge via two main restoration options (tree crops, tree plantations).
Committed Land Cover		Feasibility	Potential impact of other two restoration options (silviculture, agroforestry) on either forest or agricultural area (whichever is less).
Forest Loss		Persistence	Proxy for the likelihood of clearing of restored forests (Geist & Lambin 2002).
Agricultural Expansion		Persistence	Proxy for the likelihood of agricultural deforestation of restored tree cover (Geist & Lambin 2002).
Population Growth		Persistence	Population growth is correlated with deforestation rates (Geist & Lambin 2002).
International Aid (% GDP)		Persistence	Metric of macroeconomic stability (Bulíř & Hamann 2008), proxy for long-term forest investment stability.
Unsafe Water-related Mortality		Governance	Record of effective governance, integrated development indicator, sustainable development goal (Hutton & Chase 2016).
Unelectrified Population, Rural		Governance	Record of effective governance, integrated development indicator, energy ladder indicator (DeFries & Pandey 2010; Cook 2011).
People per Physician		Governance	Record of effective governance, integrated development indicator, sustainable development goal (Robinson & Wharrad 2001).
Corruption Score		Governance	Common predictive indices of corruption and effective governance suited for comparison across countries (Hamilton & Hammer 2018).

Table S3: Variable inflation factors and condition indices for the final stepwise multiple regression analysis. To avoid multicollinearity, variable inflation factors should be <4, tolerance values should be >0.25, and condition indices should be <15.

Tolerance, Variable Inflation Factors (VIF)

Variables	**Tolerance**	**VIF**
Change in Ag. Area	0.87	1.15
Unsafe Water Mortality	0.82	1.22
Log(Forest Area)	0.70	1.43
Log(PCP Area)	0.63	1.59

Condition Indices

Number	**Eigenvalue**	**Condition Index**	**Intercept**	***Change in Ag. Area***	***Unsafe Water Mortality***	***Log(Forest Area)***	***Log(PCP Area)***
1	1.612	1	0	0	0.056	0.175	0.19
2	1.278	1.123	0	0.37	0.259	0.021	0.006
3	1	1.27	1	0	0	0	0
4	0.728	1.488	0	0.454	0.386	0.24	0.024
5	0.382	2.053	0	0.177	0.299	0.564	0.781

Table S4: Full details and sources of data on country progress towards Bonn Challenge restoration commitments. "Bonn" refers to Bonn Challenge commitments, while "NRT" refers to national restoration targets. All pledge data were derived from https://infoflr.org.

General data

Country	Bonn pledge date	Bonn pledge (Mha)	NRT pledge (Mha)	Progress Data Source
Brazil	2016	13.0	3.2	https://portals.iucn.org/library/node/48446
Cameroon	2017	12.0	0	https://portals.iucn.org/library/node/48446
Costa Rica	2012	1.0	0.23	https://portals.iucn.org/library/node/48446
El Salvador	2012	1.0	1.0	https://portals.iucn.org/library/node/48446
Ghana	2015	2.0	1.67	https://portals.iucn.org/library/node/48446
Guatemala	2014	1.24	0.83	https://portals.iucn.org/library/node/48446
India	2015	21.0	10.4	https://portals.iucn.org/library/sites/library/files/documents/2018-026-En.pdf
Malawi	2016	4.5	0	https://portals.iucn.org/library/node/48446
Pakistan	2015	0.45	1.76	http://sdg.iisd.org/news/bonn-challenge-celebrates-first-achieved-pledge/
Rwanda	2011	2.0	1.59	https://portals.iucn.org/library/node/48446
Sri Lanka	2017	0.2	0	https://portals.iucn.org/library/node/48446
United States	2011	15.0	15.0	https://portals.iucn.org/library/node/48446

Progress

Country	Reported Progress Area (Mha)	Reported Bonn Progress (%)	Progress Report Start Year	Progress Report End Year	Adjusted Progress Area, 8-year period (Mha)	Adjusted Bonn Progress (%)
Brazil	10.13	78	2011	2017	13.5	104
Cameroon	1.66	14	2004	2018	0.95	8
Costa Rica	3.03	303	2011	2019	3.03	303
El Salvador	0.12	12	2014	2019	0.20	20
Ghana	0.24	12	2016	2019	0.64	32
Guatemala	0.40	32	2014	2019	0.63	51
India	9.8	47	2011	2017	13.1	62
Malawi	0.13	3	2016	2019	0.33	7
Pakistan	0.35	78	2011	2018	0.4	89
Rwanda	0.71	35	2010	2019	0.63	31
Sri Lanka	0.01	5	2017	2019	0.04	19
United States	16.96	113	2011	2019	16.96	113

Table S5 (Part A): Potential indicators of risk (Table S2) for the top half of countries with restoration commitments (n=31), ordered and colored by percentile values for all countries.

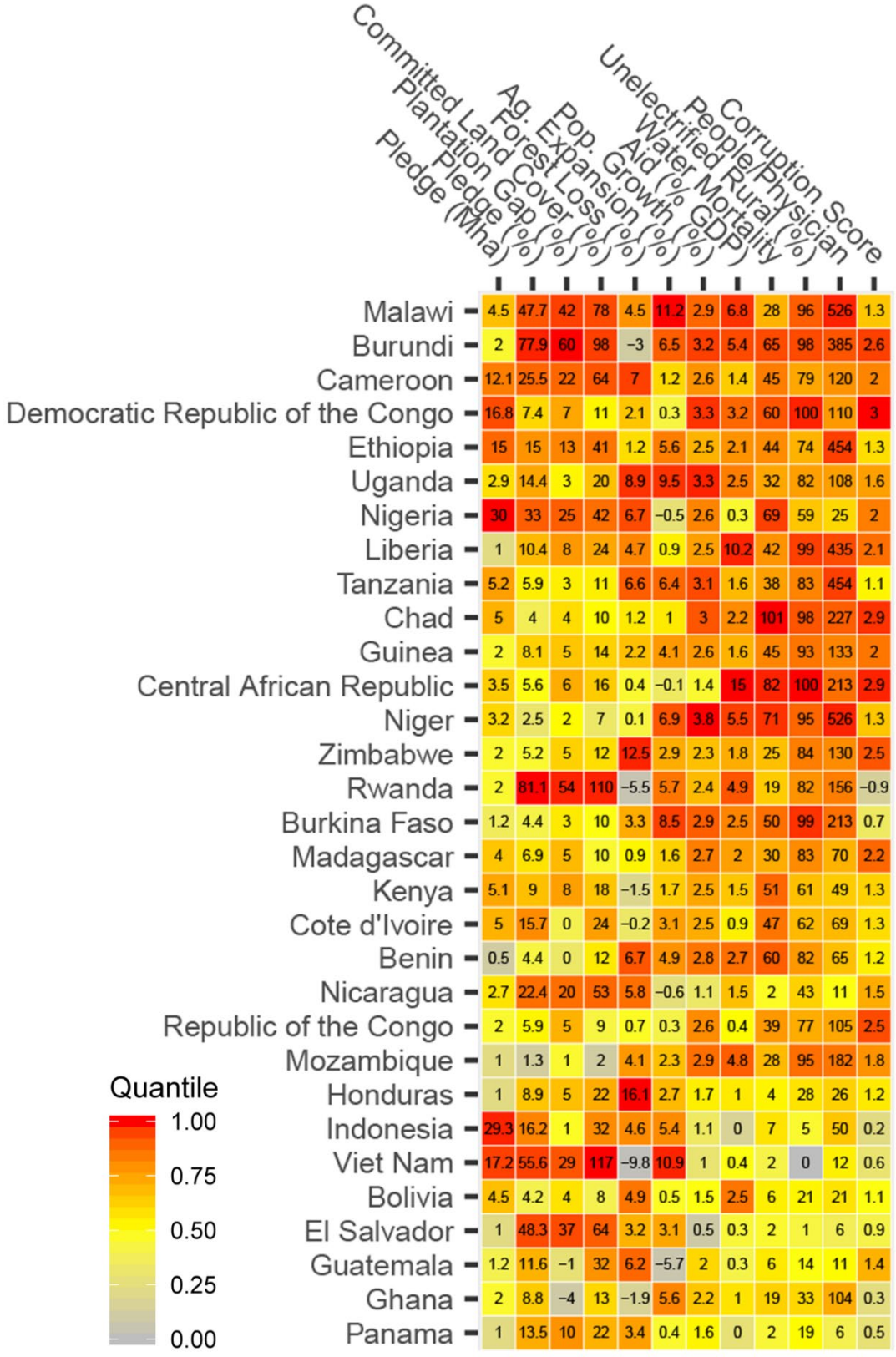

Table S5 (Part B): Potential indicators of risk (Table S2) for the bottom half of countries with restoration commitments (n=31), ordered and colored by percentile values for all countries.

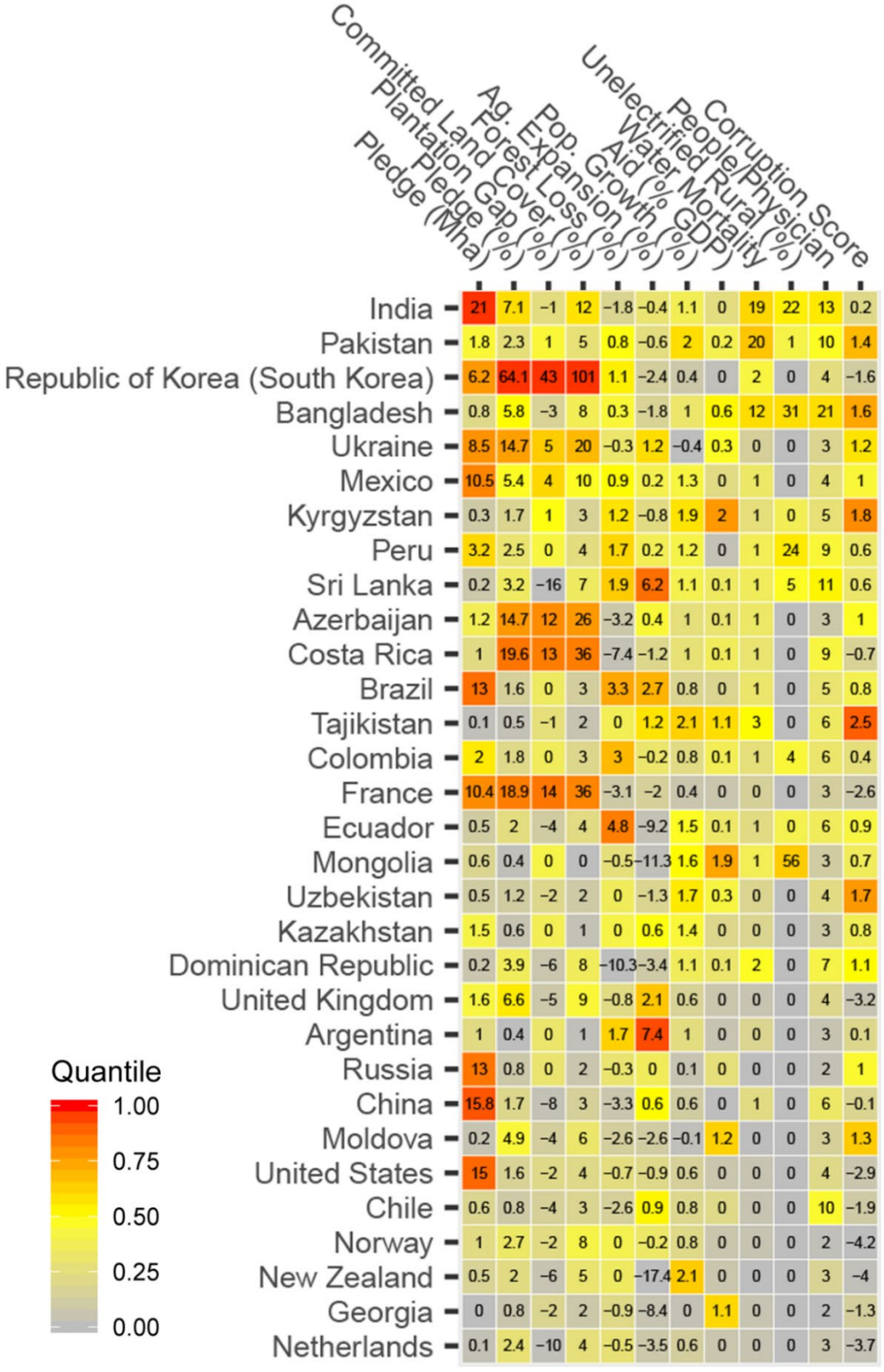

Table S6: Countries in each terminal node of the regression tree predicting pledge size. Nodes are numbered from left to right in Figure 1A.

Node number	Number of countries	Countries	Mean committed area (Mha)
1	10	Azerbaijan, Costa Rica, Dominican Republic, El Salvador, Georgia, Kyrgyzstan, Moldova, Netherlands, Sri Lanka, Tajikistan	0.2
2	16	Argentina, Chile, Colombia, Ecuador, Honduras, Kazakhstan, Mexico, Mongolia, New Zealand, Nicaragua, Norway, Panama, Peru, Republic of Korea (South Korea), United Kingdom, Uzbekistan	1.4
3	15	Bangladesh, Benin, Burkina Faso, Burundi, Chad, Ghana, Guatemala, Guinea, Kenya, Liberia, Malawi, Niger, Pakistan, Rwanda, Uganda	1.9
4	10	Bolivia, Cameroon, Central African Republic, Democratic Republic of the Congo, Ethiopia, Madagascar, Mozambique, Republic of the Congo, Tanzania, Zimbabwe	4.6
5	11	Brazil, China, Cote d'Ivoire, France, India, Indonesia, Nigeria, Russia, Ukraine, United States, Vietnam	14.4

Table S7: Country names, World Bank code country abbreviations, and labeled regions.

Country	World Bank Code	Region	Country	World Bank Code	Region
Argentina	ARG	Americas	Sri Lanka	LKA	Africa
Armenia	ARM	Asia	Moldova	MDA	Africa
Australia	AUS	Asia	Madagascar	MDG	Americas
Azerbaijan	AZE	Africa	Mexico	MEX	Europe
Burundi	BDI	Americas	Mongolia	MNG	Asia
Benin	BEN	Americas	Mozambique	MOZ	Africa
Bolivia	BOL	Africa	Malawi	MWI	Europe
Burkina Faso	BFA	Africa	Niger	NER	Asia
Bangladesh	BGD	Africa	Nigeria	NGA	Americas
Belarus	BLR	Africa	Nicaragua	NIC	Africa
Brazil	BRA	Africa	Netherlands	NLD	Africa
Central African Republic	CAF	Americas	Norway	NOR	Europe
Canada	CAN	Asia	Nepal	NPL	Asia
Chile	CHL	Americas	New Zealand	NZL	Americas
China	CHN	Americas	Pakistan	PAK	Americas
Cote d'Ivoire	CIV	Africa	Panama	PAN	Asia
Cameroon	CMR	Africa	Peru	PER	Africa
Congo, Dem. Rep.	COD	Americas	Russian Fed.	RUS	Europe
Congo, Rep.	COG	Americas	Rwanda	RWA	Africa
Colombia	COL	Africa	El Salvador	SLV	Asia
Costa Rica	CRI	Europe	Chad	TCD	Africa
Ecuador	ECU	Asia	Uganda	UGA	Europe
Spain	ESP	Africa	Ukraine	UKR	Europe
Ethiopia	ETH	Americas	United States	USA	Americas
France	FRA	Africa	Vietnam	VNM	Asia
United Kingdom	GBR	Americas	Zambia	ZMB	Americas
Georgia	GEO	Asia	Dominican Rep.	DOM	Asia
Ghana	GHA	Asia	Kazakhstan	KAZ	Asia
Guinea	GIN	Africa	Kyrgyz Republic	KGZ	Asia
Guatemala	GTM	Africa	Tajikistan	TJK	Africa
Honduras	HND	Americas	Tanzania	TZA	Asia
Indonesia	IDN	Asia	Uzbekistan	UZB	Africa
India	IND	Asia	Zimbabwe	ZWE	Africa
Kenya	KEN	Africa			
Korea, Rep.	KOR	Americas			
Lao PDR	LAO	Americas			
Lebanon	LBN	Africa			
Liberia	LBR	Africa			

Literature Cited

Bastin, J.F., Berrahmouni, N., Grainger, A., Maniatis, D., Mollicone, D., Moore, R., Patriarca, C., Picard, N., Sparrow, B., Abraham, E.M., Aloui, K., Atesoglu, A., Attorre, F., Bassüllü, Ç., Bey, A., Garzuglia, M., García-Montero, L.G., Groot, N., Guerin, G., Laestadius, L., Lowe, A.J., Mamane, B., Marchi, G., Patterson, P., Rezende, M., Ricci, S., Salcedo, I., Diaz, A.S.P., Stolle, F., Surappaeva, V. & Castro, R. (2017). The extent of forest in dryland biomes. *Science (80-.).*, 356, 635–638.

Bulíř, A. & Hamann, A.J. (2008). Volatility of Development Aid: From the Frying Pan into the Fire? *World Dev.*, 36, 2048–2066.

Cook, P. (2011). Infrastructure, rural electrification and development. *Energy Sustain. Dev.*, 15, 304–313.

Dave, R., Saint-Laurent, C., Moraes, M., Simonit, S., Raes, L. & Karangwa, C. (2017). *Bonn Challenge Barometer of Progress: Spotlight Report 2017.* Gland, Switzerland.

DeFries, R. & Pandey, D. (2010). Urbanization, the energy ladder and forest transitions in India's emerging economy. *Land use policy*, 27, 130–138.

DeFries, R.S., Rudel, T., Uriarte, M. & Hansen, M. (2010). Deforestation driven by urban population growth and agricultural trade in the twenty-first century. *Nat. Geosci.*, 3, 178–181.

FAO. (2015). *Global Forest Resources Assessment 2015*. Food and Agriculture Organization of the United Nations, Rome, Italy.

FAO. (2019). FAOSTAT agricultural statistics database. [WWW Document]. URL http://faostat.fao.org/site/291/default.aspx

Geist, H.J. & Lambin, E.F. (2002). Proximate Causes and Underlying Driving Forces of Tropical Deforestation. *Bioscience*, 52, 143–150.

Grainger, A. (2008). Difficulties in tracking the long-term global trend in tropical forest area. *Proc. Natl. Acad. Sci. U. S. A.*, 105, 818–823.

Hamilton, A. & Hammer, C. (2018). *Can We Measure the Power of the Grabbing Hand? A Comparative Analysis of Different Indicators of Corruption*. The World Bank.

Hansen, M.C., Potapov, P. V, Moore, R., Hancher, M., Turubanova, S.A., Tyukavina, A., Thau, D., Stehman, S. V, Goetz, S.J., Loveland, T.R., Kommareddy, A., Egorov, A., Chini, L., Justice, C.O. & Townshend, J.R.G. (2013). High-resolution global maps of 21st-century forest cover change. *Science (80-.).*, 342, 850–3.

Hutton, G. & Chase, C. (2016). The Knowledge Base for Achieving the Sustainable Development Goal Targets on Water Supply, Sanitation and Hygiene. *Int. J. Environ. Res. Public Health*, 13, 536.

Kovacevic, M., Assa, J., Bonini, A., Calderon, C., Hsu, Y.C., Lengfelder, C. & Tapia, H. (2018). *Human Development Indicators and Indices: 2018 Statistical Update*. United Nations Development Programme, New York, NY.

MacKinnon, J.G. & White, H. (1985). Some heteroskedasticity-consistent covariance matrix estimators with improved finite sample properties. *J. Econom.*, 29, 305–325.

Robinson, J.J.A. & Wharrad, H. (2001). The relationship between attendance at birth and maternal mortality rates: an exploration of United Nations' data sets including the ratios of physicians and nurses to population, GNP per capita and female literacy. *J. Adv. Nurs.*, 34, 445–455.

Sexton, J.O., Noojipady, P., Song, X.-P., Feng, M., Song, D.-X., Kim, D.-H., Anand, A., Huang, C., Channan, S., Pimm, S.L.L. & Townshend, J.R. (2015). Conservation policy and the measurement of forests. *Nat. Clim. Chang.*, 6, 192–196.

World Bank. (2019). World Bank Data [WWW Document]. URL http://data.worldbank.org/

Zeileis, A. (2004). Econometric computing with HC and HAC covariance matrix estimators. *J. Stat. Softw.*, 11.