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SOM Text T1. Complementary information on methods

A. Preparation of jaguar presence – absence data for further analysis

We utilized all available records of jaguar presence and absence collected between 2000 and 2020 (Fig. 1, SOM Table 1, and SOM Dataset 1); however, we thinned out clumped data points, allowing a maximum of one record per each 100 km^2 to avoid the negative effects of spatial autocorrelation (Segurado et al. 2006, Dormann et al. 2007, de Angelo et al. 2011).

To ensure equal numbers of jaguar presence and absence points for the subsequent logistic regression analysis (see below), we randomly selected the balance of the absence points from the areas within the historic jaguar range where jaguars were identified as locally extinct by the IUCN 2000 (Sanderson et al. 2002, Caso et al. 2008) or 2015 assessments (Quigley et al. 2018) and where no new jaguar records were collected. We assumed that the lack of recent jaguar records confirms the correctness of classifying these areas as absence areas. Following this assumption, we did not select random absence points from the central part of Mato Grosso state in Brazil, although it was classified as an area of absence by the earlier assessments. Sanderson et al. (2002) and Zeller (2007) indicated a lack of information from this area, while we had a number of jaguar records from all over Mato Grosso in our dataset. Therefore, we selected additional absence points from known absence areas indicated by national jaguar censuses (see SOM Fig. 1) and a 200 km buffer around the IUCN 2015 jaguar range outside the historic jaguar range, e.g. in the Andes (Fig. 1).

B. Kriging interpolation procedures

Kriging is a geostatistical method applied to estimate distribution and abundance when data are spatially auto-correlated (Monestiez et al. 2006, Hengl et al. 2009, Nazeri et al. 2015). In kriging, the probability of the presence of a species for each raster cell is determined by: (1) the number, distribution, and value (presence = 1, absence = 0) of data points, (2) the distance of a cell from each data point entered into calculation step, and (3) the values predicted by a semivariogram model which is estimating the spatial autocorrelation of the data. On the other hand, logistic regression is used to estimate the probability of species occurrence based on the relationship between presence/absence data and a set of predictive variables (Elith and Leathwick 2009).

Kriging interpolation was applied to our dataset of jaguar presence-absence data in its entirety. First, we calculated a spatial prediction of the probability of jaguar presence (values from 0 to 1) by interpolating all jaguar presence (value 1) and absence (value 0) records using the kriging interpolation function within ArcGIS 10.3, applying ordinary kriging, the spherical semivariogram model, and the ten nearest points to calculate values for each raster cell (1 km^2). Additionally, we calculated the kriging variance for each cell. High values of kriging variance are related to a low density of data points and may be used as an indicator of areas of high uncertainty of prediction (Heuvelink and Pebesma, 2002). Therefore, we calculated the density of data points and the predictions from areas with the highest values of kriging variance and low density of data points (lower than 3 points/10,000 km^2) were treated as low confidence.

C. Supplementary information on the logistic regression procedures

In the logistic regression, model selection was made using Akaike Information Criterion AIC (Burnham and Anderson 2002). We also calculated Nagelkerke's R-Square, the area under the receiver operating characteristic curve (AUC), and produced a classification table to evaluate how well the model fits the data (Nagelkerke 1991, Hosmer et al. 2013). Finally, to test the predictive performance of the general model, we conducted a 10-fold cross-validation with a 75% / 25% data split for our training and evaluation data, and we calculated an AUC value for each run (Boyce et al. 2002).

We converted the logit values from the best regional models to the probability of jaguar occurrence and made spatial predictions at the same resolution (1 km^2) for each eco-region. We then combined the regional maps into a single map for South America. Predictions for 2000 and 2020 were based on the relevant data for each period for four variables: forest cover, croplands, pastures, and human population density. We assumed that these four variables were good indicators for habitat loss and degradation because they are correlated with important human impacts, such as deforestation, land transformation, and hunting intensity (Woodroffe 2000). However, we couldn't find appropriate data for other variables from specific time periods, and we used the same data for both periods (see SOM Table 2). To explore losses of suitable habitats for jaguars, we calculated differences in the probability of jaguar occurrence between 2000 and 2020.

We calculated Pearson's correlation coefficients between pairs of all independent variables. If any correlation coefficient was >0.75, we eliminated the one with a lower effect (lower Z value) to avoid multicollinearity. Additionally, we tested for multicollinearity in our models using standard multiple regression, checking tolerance values for each of the predictive variables. We also eliminated variables that, due to interaction with other variables, had different sign of effect than expected (see SOM Table 2) as such models would be difficult to interpret.

D. Justification for converting probability ranges into jaguar status categories.

We classified the estimated probability values into four classes that refer to the categories of distribution mapping standards for the IUCN Red List (Technical Working Group. 2019): (1) extinct (mean probability values between 0 and 0.25), (2) possibly extinct (>0.25-0.49), possibly extant (>0.49-0.75), and extant (>0.75-1).

Cut-off values between possibly extinct and possibly extant categories were set as 0.49 and not 0.5 to avoid misclassifying likely inhabited areas from which data are missing. This is possible because logistic regression never produces values equal to 1, and a value of 0.98 represents a high probability of jaguar occurrence. In kriging interpolation, the 0 value is common when there is no data. The cut-off value of 0.25 between extinct and possibly extinct refers to a situation when the probability value estimated by one of the models is up to 0.5 (on the border between likely and unlikely to occur), and that of the other model is close to 0 or when both probabilities are below 0.25. The cut-off value of 0.75 between extant and possibly extant refers to the situation when the probability from one model is close to 1, and the other is over 0.5, or both are over 0.75, indicating a high probability of jaguar occurrence.

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SOM Table T1. Number and main sources of jaguar presence records (from 2000 – 2020) and jaguar true absence points from each country, used for the distribution analysis. We reduced the original set of data to maximum 1 point/100 km^2. All data and their detailed sources are provided in SOM Dataset D1.

Country	N jaguar presence records	N jaguar true absence points	Persons responsible for providing data from a country	Institution	Source/Reference
Argentina	200	8	A. Paviolo, C. De Angelo, V. Quiroga, P. Cruz, P. Perovic	CONICET, Proyecto Yaguareté Asociación Civil CeIBA and National Park Administration	https://sib.gob.ar/especies/panthera-onca?tab=sitios Zeller 2007, and unpublished data
Bolivia	325	0	R. Wallace, M. Viscarra, G. Ayala, N. Negrões	Wildlife Conservation Society, ACEAA_Conservación Amazónica	Wallace et al. 2013, WCS, unpublished data ACEAA, unpublished data
Brazil	849	25	R. Morato, K. Ferraz, M. Portugal, F. Tortato, E. Carvalho Jr., E. Ramalho	ICMBio/CENAP, Panthera Brazil,	Morato et al.. 2019, Portugal et al. 2019, unpublished data
Colombia	102	28	E. Payan, A. Parra Romero, I. A. Rodríguez, P. Castaño, H. Ponare, J. Mendieta, J. A. Cabrera,	Panthera; Parques Nacionales Naturales de Colombia; Equipo P.V.C.; Reserva Wuayabero; PNN El Tuparro; PNN Los Katios; PNN Paramillo; PNN Amacayacu; PNN Complejo volcánico Doña Juana Cascabel; PNN Río Pure; PNN Serranía de Churumbelos; PNN Tayrona; Sierra de La Macarena; Amazon Conservation Team ACT; Conservation Internacional Foundation; Fundación Puerto Rastrojo; Universidad Javeriana; Instituto	Bayly et al. 2012; Payán Garrido & Soto Vargas 2012; Rabinowitz & Zeller 2010, Fundación Omacha 2016; https://omacha.org/especies-amenazadas-felinos/; Zeller 2007). https://doi.org/10.1016/j.biocon.2010.01.002; https://www.minambiente.gov.co/images/normativa/app/resoluciones/75-res%201912%20de%202017.pdf; and unpublished data

Country	N jaguar presence records	N jaguar true absence points	Persons responsible for providing data from a country	Institution	Source/Reference
				Amazónico de Investigaciones Científicas – SINCHI; Expedición científica Ventana Mesay; PNN Yaigoje Apaporis; P.NN.Serranía de los Churumbelos; Habitantes Vereda Yarumales.	
Ecuador	57	8	S. Espinosa,	Universidad Autónoma de San Luis Potosí/Pontificia Universidad Católica del Ecuador	Espinosa et al. 2018; MAE-WCS, Jaguar Action Plan Ecuador; Zeller 2007
French Guiana	97	3	R. Berzins	Office Français de la Biodiversité	Berzins, R. unpublished data; Parc Amazonien de Guyane, unpublished Office National de la Chasse et de la Faune Sauvage, unpublished data, Faune-Guyane. Base de donnée collaborative, Gepog, Kwata, SHF, LPO, DEAL
Guyana	140	4	E. Paemelaere, M. Hallett	Panthera	Unpublished data
Paraguay	191	0	J. Thompson, H. Castillo	Asociacias. Guyra Paraguay	Morato et al.. 2019, Zeller 2007, GEF/PNUMA/SEAM/PNUD/OEA/FMB. 2017. Plan de Manejo P. N. Teniente Enciso, Paraguay, Nagy-Reis et al. 2020, Thompson et al. 2020.
Peru	73	14	M. Tobler, Elmer M. Campos Llacsahuanga,	San Diego ZOO, USA, SERNANP	Amanzo 2006; Bravo 2010; Bravo et al. 2008; Bravo et al. 2016; Castro-Vergara 2012; Escobedo Torres 2015; Jorge et al. 2006; Figueroa 2004; Montenegro and Moya 2011; Patterson & López Wong 2014; Zeller 2007,
Suriname	57	2	P. Ouboter, Vanessa Kadosoe	Institute for Neotropical Wildlife and Environmental Studies, NeoWild	Ouboter et al., 2011, Gajapersad et al., 2011, Nederbiel, 2013, Kasanpawiro & Ouboter, 2013, Ouboter & Kadosoe, 2016, Mangalsing, 2017, and unpublished data
Venezuela	456	333	W. Jędrzejewski	Instituto Venezolano de Investigaciones Cientificas, IVIC	Jędrzejewski et al. 2017, and unpublished

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SOM Table T1. Information on candidate predictive variables used in the spatial analysis.

No	Variable code	Full variable name, units and expected impact on jaguar occurrence: [+] - positive, [-] - negative	Data description / Time period to which the data refer/Notes	Source	Reference #
1	TEMP	Mean annual temperature (°C) [+] or [-]	The original value downloaded from the WorldClim webpage was divided by 10 to express it in Centi-grades. Mean from 1950 - 2000;	Bioclim WorldClim - Global Climate Data www.worldclim.org/bioclim	[1]
2	PRECIP	Annual precipitation (mm) [+]	In the tropics precipitation values are usually related to productivity Mean from 1950 - 2000	Bioclim WorldClim - Global Climate Data www.worldclim.org/bioclim	[1]
3	CANOPY	Mean forest canopy cover (%) [+]	% forest cover calculated for a square kilometre. Mean for the period 2000 – 2011 – used for model construction; Mean for 2018 – used for spatial prediction of the current (2020) jaguar occurrence; Mean for 2000 – used for the spatial prediction of the past (2000) jaguar occurrence.	MODIS: MOD44B https://lpdaac.usgs.gov/	[2,3]
4	NPP_{MEAN}	Mean net primary productivity (grams of elemental carbon per m^2) [+]	The net (without respiration) amount of solar energy converted to plant organic matter through photosynthesis, a measure obtained from satellite imagines. Mean from 1981-2014	MODIS: MOD17A3 http://www.ntsg.umt.edu/project/mod17	[4]
5	NPP_{SD}	Standard deviation of net primary productivity [+] or [-]	A measure of seasonality in primary productivity or seasonal abundance of plant organic matter Mean from 1981-2014	MODIS: MOD17A3 http://www.ntsg.umt.edu/project/mod17	[4]

6	GPP_{MEAN}	Mean gross primary productivity (grams of elemental carbon per m^2) [+]	Total amount of chemical energy produced by plants through photosynthesis. Mean from 1981-2014	MODIS: MOD17A3 http://www.ntsg.umt.edu/project/mod17	[4]
7	GPP_{SD}	Standard deviation of gross primary productivity [+] or [-]	A measure of seasonality in primary productivity or seasonal abundance of plant organic matter Mean from 1981-2014	MODIS: MOD17A3 http://www.ntsg.umt.edu/project/mod17	[4]
8	$NDVI_{MEAN}$	Mean Normalized Difference Vegetation Index [+]	Vegetation index obtained from satellite imagines, measuring photosynthetic activity of plants and indicating vegetation productivity and abundance. NDVI quantifies amount of green vegetation by measuring the difference between near-infrared (which vegetation strongly reflects) and red light (which vegetation absorbs) Mean from 1981-2014	MODIS:MCD43A4_NDVI https://lpdaac.usgs.gov/	[5.6]
9	$NDVI_{SD}$	Standard deviation of normalized difference vegetation index [+] or [-]	Measure of seasonality or seasonal abundance of vegetation Mean from 1981-2014	MODIS:MCD43A4_NDVI https://lpdaac.usgs.gov/	[5.6]
10	EVI_{MEAN}	Enhanced vegetation index [+]	Vegetation abundance and productivity measure. Similar to NDVI, with higher sensitivity and accounting for differences between canopy and background Mean from 1981-2014	MODIS:MCD43A4_EVI https://lpdaac.usgs.gov/	[7-9]
11	EVI_{SD}	Standard deviation of enhanced vegetation index [+] or [-]	Measure of seasonality or seasonal abundance of vegetation Mean from 1981-2014	MODIS:MCD43A4_EVI https://lpdaac.usgs.gov/	[7-9]

12	$NDWI_{MEAN}$	Mean annual value of normalized difference water index (values -1 to 1) [+]	Measure of water content in vegetation (leaves), often used to detect droughts; however it indicates also ground water content; positive values are typically very moist or flooded areas; while negative values are drier areas (i.e. terrestrial vegetation and bare soil) Mean from 1981-2014	MODIS:MCD43A4_NDWI https://lpdaac.usgs.gov/	[10]
13	$NDWI_{SD}$	Standard deviation of normalized difference water index [+] or [-]	Variability/seasonality in water content in vegetation; high values indicate seasonal flooding or seasonal changes between fresh vegetation and droughts Mean from 1981-2014	MODIS:MCD43A4_NDWI https://lpdaac.usgs.gov/	[10]
14	HPDEN_LN	Human population density people/km^2. logarithmically transformed [-]	Mean for 2011 – used for the model construction; Mean for 2000 – used for the spatial prediction of the 2000 jaguar occurrence probability. Mean prediction for 2020 – used for spatial prediction of the current jaguar occurrence probability.	http://sedac.ciesin.columbia.edu/data	[11]
15	HFOOTP_2004	Human footprint index 2004. (values 0 to 100) [-]	Index reflecting human caused environmental changes based on data from 1995–2004;	NASA Socioeconomic Data and Applications Center (SEDAC) http://sedac.ciesin.columbia.edu/data	[12-14]
16	HFOOTP_2009	Human footprint change index 2009 (values 0 to 50) [-]	Index approximating a change in human foot print between 1993 and 2009;	NASA Socioeconomic Data and Applications Center (SEDAC) http://sedac.ciesin.columbia.edu/data	[12-14]
17	PROT_AR	Protection status: if inside a protected area - value 1, if outside – value 0 [+]	All categories of protected areas included except forestry reserves.	World map of protected areas (WDPA_ - data for 2015 http://www.protectedplanet.net/ Amazonia Socioambiental RAISG 2019	[15]

				https://www.amazoniasocioambiental.org/es/mapas/#!/areas Data verified for each country with webpages of respective ministries of environment.	
18	INDTER	Indigenous territories: if inside - value 1, if outside – value 0 [+]	We included indigenous territories as they have important role in jaguar conservation.	Amazonia Socioambiental RAISG 2019 https://www.amazoniasocioambiental.org/es/mapas/#!/areas Data verified for each country with webpages of respective ministries of environment.	[15]
19	ROAD_DENSITY	Road density index derived from GRIP4_Global Roads (values 0 to 4) [-]	An index approximating road density. The four main road categories were converted to raster and then summed at each 1 km^2 pixel. From this value we calculated a moving average within a distance of 20 km on both sides of the road (using Focal statistic/mean function in ArcGis). Data for 2018 only	https://www.globio.info/download-grip-dataset	GRIP4_GlobalRoads [16]
20	Cropland	Proportion of cropland area in a 1 km^2 cell [-]	Calculated from the Land Cover data at 300 m resolution Data for 2010 – used for model construction; Data for 2015 – used for spatial prediction of the current (2020) jaguar range; Mean for 2000 – used for the spatial prediction of the 2000 jaguar range.	https://maps.elie.ucl.ac.be/CCI/viewer/download.php	[17]
21	Pasture	Proportion of pasture area in a 1 km^2 cell [+] or [-]	Calculated from the Land Cover data at 300 m resolution Data for 2010 – used for model construction;	https://maps.elie.ucl.ac.be/CCI/viewer/download.php	[17]

	Data for 2015 – used for spatial prediction of the current (2020) jaguar range; Mean for 2000 – used for the spatial prediction of the 2000 jaguar range.	

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SOM Table T3. Parameters of the best logistic regression models of jaguar occurrence estimated for the whole South America and separately for each of eight distinguished eco-regions (compare Fig. 1). Codes used for eco-regions: Ecoreg1 – Andes, Ecoreg2 – Los Llanos and Guiana Highlands; Ecoreg3 – Amazon, Ecoreg4 – Caatinga, Ecoreg5 – Cerrado East, Ecoreg6 – Cerrado West and Pantanal, Ecoreg7 – Atlantic Forest, Ecoreg8 – Gran Chaco.

1. General model based on the combined data for the whole South America				
Parameter	Estimate	Standard Error	Z	*p*-Value
CONSTANT	-4.86612	0.4933	-9.86	0.000
TEMP	0.28087	0.0185	15.20	0.000
NDVI_SD	-3.32935	1.3873	-2.40	0.016
NPP_SD	-0.00091	0.0009	-1.05	0.295
NDWI_MEAN	4.25178	1.5308	2.78	0.005
CANOPY	0.02646	0.0033	8.08	0.000
HPDEN_LN	-0.42482	0.0409	-10.39	0.000
ROAD_DENSITY	-2.40278	0.2824	-8.51	0.000
CROPLAND	-0.01701	0.0020	-8.53	0.000
PASTURE	-0.00413	0.0019	-2.13	0.033
INDTER	0.58500	0.2437	2.40	0.016
PROT_AR	1.52736	0.1295	11.79	0.000
ECOREG1	-0.97088	0.1742	-5.57	0.000
ECOREG2	-0.29431	0.1837	-1.60	0.109
ECOREG3	-0.71356	0.1863	-3.83	0.000
ECOREG4	-0.87656	0.2403	-3.65	0.000
ECOREG5	-1.40194	0.2070	-6.77	0.000
ECOREG6	0.01197	0.1677	0.07	0.943
ECOREG7	-0.42533	0.1811	-2.35	0.019
Ecoregion 1. Andes				
CONSTANT	-8.52946	1.0192	-8.37	0.000
PRECIP	0.00048	0.0001	3.26	0.001

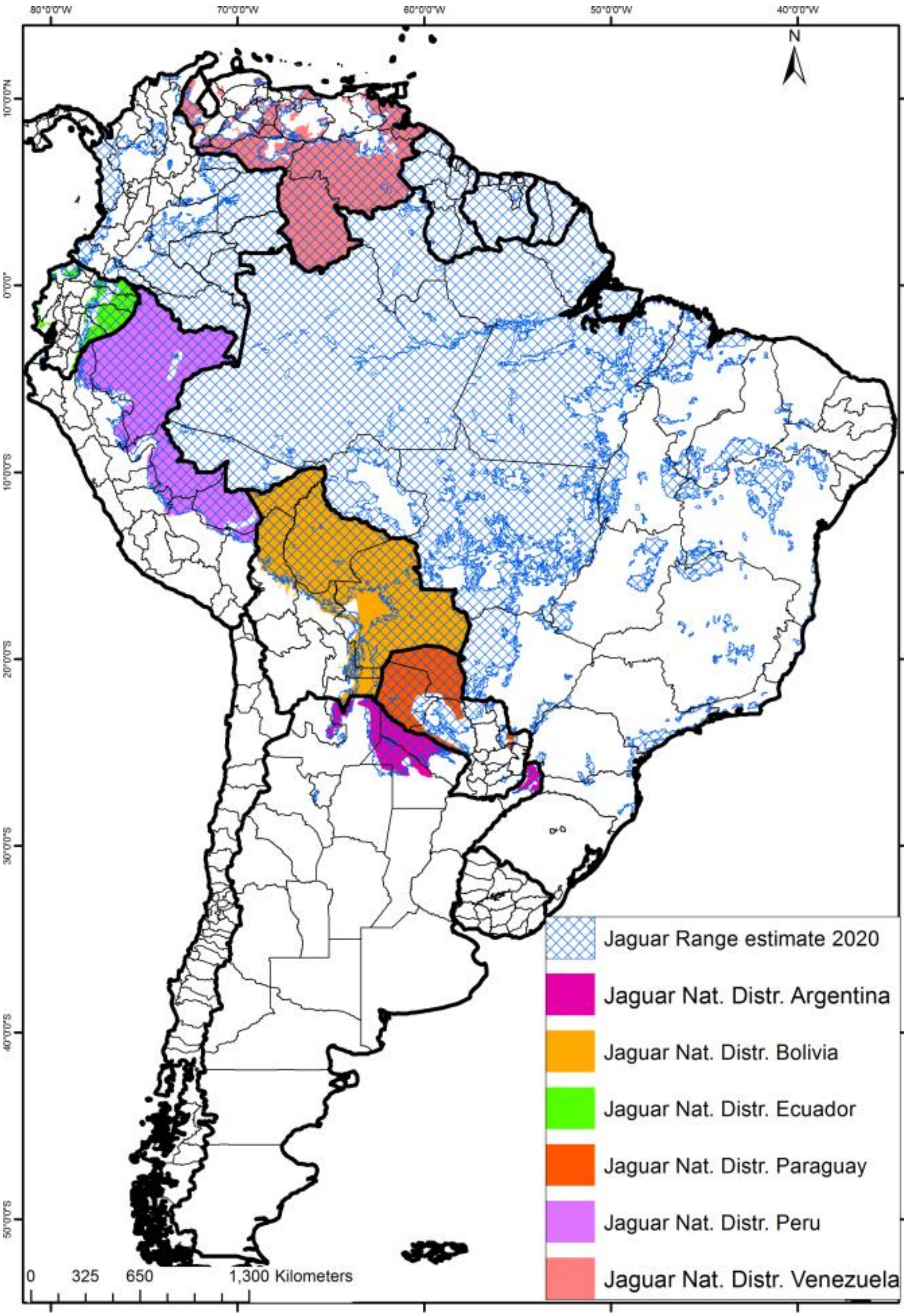
TEMP	0.16851	0.0335	5.04	0.000
NPP_SD	-0.00515	0.0023	-2.20	0.028
EVI_MEAN	5.76023	1.7752	3.24	0.001
EVI_SD	10.75968	3.4743	3.10	0.002
CANOPY	0.03072	0.0069	4.44	0.000
HPDEN_LN	-0.14191	0.0806	-1.76	0.078
ROAD_DENSITY	-1.54270	0.4972	-3.10	0.002
HFOOTP_2004	-0.02427	0.0120	-2.03	0.043
PASTURE	0.00944	0.0052	1.82	0.069
PROT_AR	1.23225	0.2806	4.39	0.000
Ecoregion 2. Los Llanos and Guiana Highlands				
CONSTANT	-6.86451	2.6253	-2.61	0.009
PRECIP	0.00096	0.0003	3.47	0.001
TEMP	0.17577	0.0895	1.96	0.050
EVI_MEAN	14.12350	1.7962	7.86	0.000
HPDEN_LN	-0.29429	0.1694	-1.74	0.082
ROAD_DENSITY	-3.47662	0.7571	-4.59	0.000
HFOOTP_2004	-0.05946	0.0176	-3.37	0.001
PASTURE	-0.01871	0.0058	-3.23	0.001
CROPLAND	-0.03066	0.0067	-4.58	0.000
Ecoregion 3. Amazon				
CONSTANT	-8.68598	3.7695	-2.30	0.021
TEMP	0.44931	0.1395	3.22	0.001
GPP_SD	0.06639	0.0155	4.28	0.000
NPP_SD	-0.02018	0.0037	-5.42	0.000
HPDEN_LN	-0.63711	0.0933	-6.83	0.000
ROAD_DENSITY	-3.30995	1.1024	-3.00	0.003
PASTURE	-0.03242	0.0056	-5.76	0.000

CROPLAND	-0.04132	0.0055	-7.56	0.000
INDTER	0.87086	0.4774	1.82	0.068
PROT_AR	1.55609	0.3981	3.91	0.000
Ecoregion 4. Caatinga				
CONSTANT	18.08513	5.2461	3.45	0.001
TEMP	-0.74099	0.2131	-3.48	0.001
GPP_SD	0.08551	0.0300	2.85	0.004
NDVI_SD	-21.34992	12.2342	-1.75	0.081
HPDEN_LN	-1.10358	0.3864	-2.86	0.004
ROAD_DENSITY	-13.37359	4.1535	-3.22	0.001
PASTURE	0.03582	0.0105	3.41	0.001
PROT_AR	1.94360	0.7358	2.64	0.008
Ecoregion 5. Cerrado East				
CONSTANT	3.00747	0.7757	3.88	0.000
EVI_SD	-37.36884	7.0021	-5.34	0.000
HPDEN_LN	-0.38247	0.1805	-2.12	0.034
PASTURE	-0.01310	0.0058	-2.25	0.025
PROT_AR	1.68818	0.4049	4.17	0.000
Ecoregion 6. Cerrado West and Pantanal				
CONSTANT	5.24716	3.2642	1.61	0.108
TEMP	-0.24444	0.1083	-2.26	0.024
NPP_SD	0.00794	0.0040	1.99	0.046
NDVI_SD	-15.10079	4.1980	-3.60	0.000
CANOPY	0.02775	0.0158	1.75	0.080
ROAD_DENSITY	-6.55153	1.5854	-4.13	0.000
PASTURE	-0.01853	0.0072	-2.58	0.010
CROPLAND	-0.04392	0.0067	-6.59	0.000
PROT_AR	0.80813	0.4829	1.67	0.094

NDWI_MEAN	8.35651	5.2715	1.59	0.113
PRECIP	0.00334	0.0009	3.85	0.000
Ecoregion 7. Atlantic Forrest				
CONSTANT	-0.17184	0.9140	-0.19	0.851
GPP_SD	-0.02010	0.0120	-1.68	0.093
NPP_SD	0.01160	0.0027	4.36	0.000
CANOPY	0.02412	0.0067	3.61	0.000
HPDEN_LN	-0.38763	0.1123	-3.45	0.001
ROAD_DENSITY	-1.94398	1.0016	-1.94	0.052
PASTURE	-0.02881	0.0087	-3.30	0.001
CROPLAND	-0.00855	0.0053	-1.61	0.108
PROT_AR	2.21990	0.3071	7.23	0.000
Ecoregion 8. Gran Chaco				
CONSTANT	-32.39826	3.7211	-8.71	0.000
TEMP	1.56663	0.1745	8.98	0.000
GPP_SD	-0.06740	0.0231	-2.91	0.004
NPP_SD	0.00556	0.0031	1.80	0.073
EVI_SD	41.44711	10.7595	3.85	0.000
NDWI_SD	-80.64728	18.2854	-4.41	0.000
HPDEN_LN	-0.48509	0.2037	-2.38	0.017
CROPLAND	-0.05495	0.0083	-6.61	0.000
PROT_AR	1.23437	0.5159	2.39	0.017

Variables' abbreviations: TEMP – mean annual temperature, PRECIP – annual precipitation, CANOPY –forest cover, HPDEN_LN - human population density, ROAD_DENSITY – index approximating road density, CROPLAND – proportion of croplands in 1 km^2 area, PASTURE – proportion of pastures in 1 km^2 area, PROT_AR – protected areas, INDTER - Indigenous territories, HFOOTP2004 - Human footprint index 2004, NDVI_SD - Standard deviation of normalized difference vegetation index, EVImean – enhanced vegetation index (mean value), EVI_SD - Standard deviation of enhanced vegetation index, NDWImean - Mean annual value of normalized difference water index, NDWI_SD - Standard deviation of normalized difference water index, NPP_SD - Standard deviation of net primary productivity, GPP_SD - Standard deviation of gross primary productivity.

SOM Fig. F1. Jaguar range 2020 estimated by this current analysis (as in Fig 5, main text), compared to the available results from national estimates of jaguar distribution elaborated in some countries of South America.



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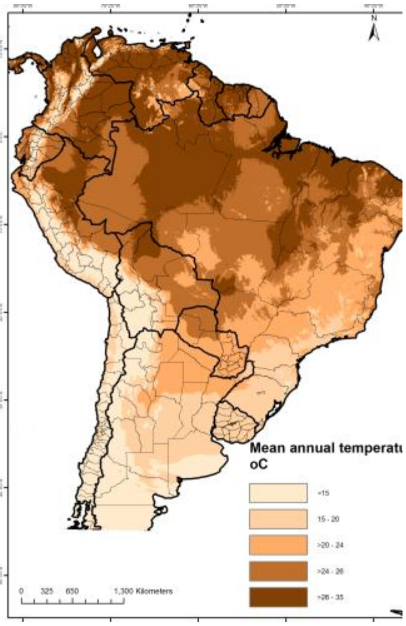
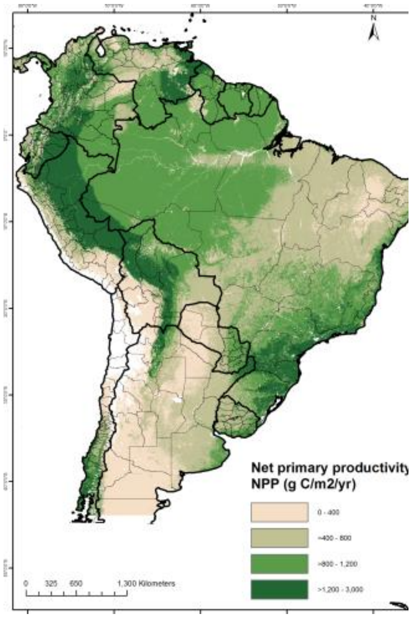
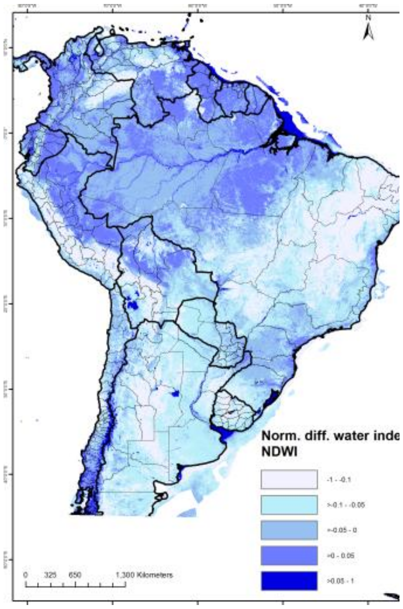
SOM Figure F2. Spatial projection of values of the main predictive variables (as in SOM Table 2, SOM Dataset 2) used to fit the logistic regression models of jaguar presence and absence:



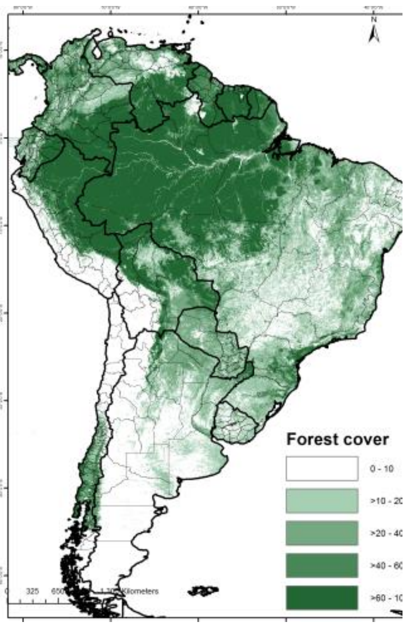
Mean annual temperature



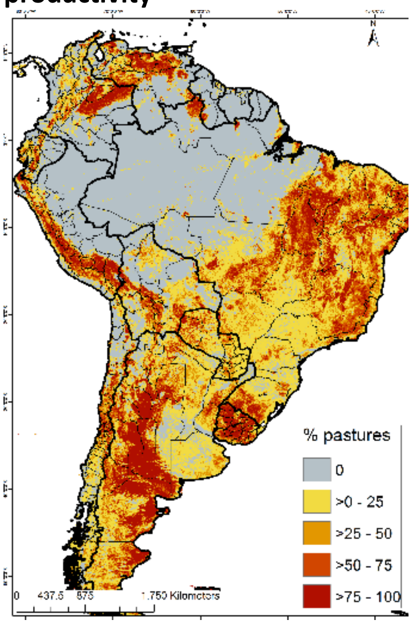
NPP$_{mean}$ - Net primary productivity



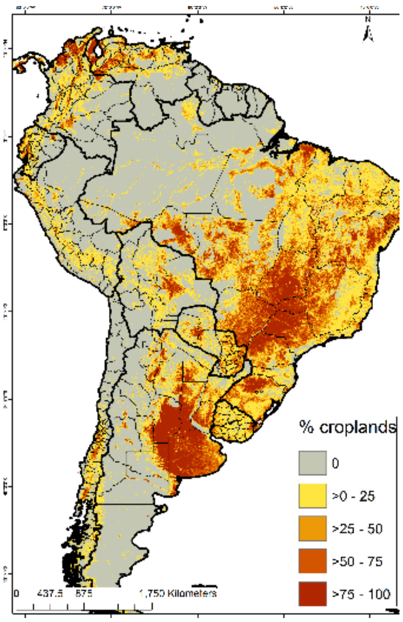
NDWI$_{mean}$ - Normalized difference water index



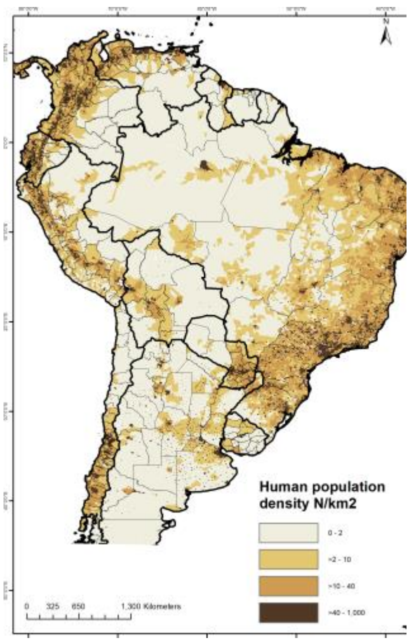
Forest cover



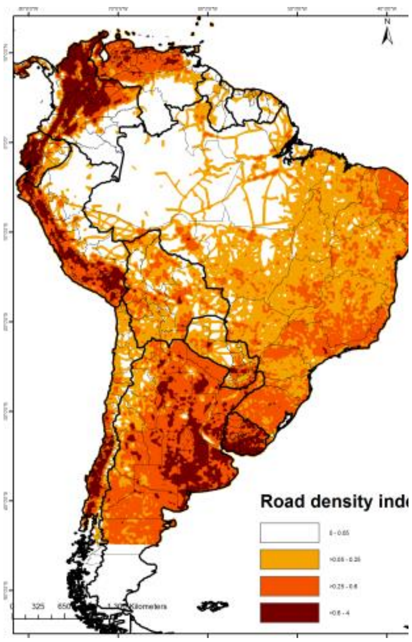
Pastures



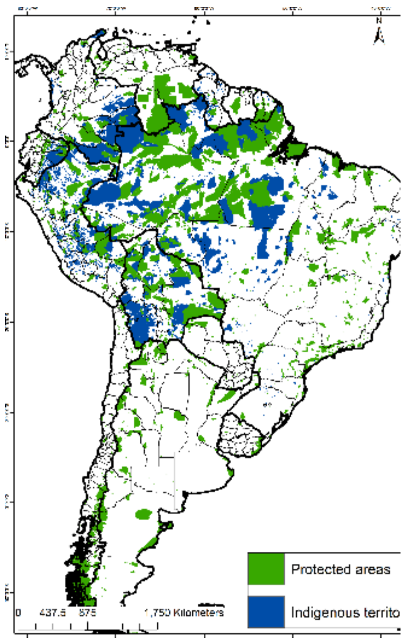
Croplands



Human population density



Road density index



Protected areas and indigenous territories

Datasets available as supplementary online materials SOM:

SOM Dataset D1. Jaguar presence – absence data from South America from 2000 – 2020 used for the analysis - Excel file.

SOM Dataset D2. Protected areas and indigenous territories of South America – shp file.

SOM Dataset D3. Probabilities of jaguar occurrence in South America in 2020 predicted by the mosaic composition of logistic regression models for each eco-region – raster file.

SOM Dataset D4. Current (2020) jaguar status in South America within its historic range (four categories) -raster file.

SOM Dataset D5. Current (2020) jaguar range in South America – shp file.