

Supplementary Materials

Prioritizing areas for primate conservation in Argentina

Ilaria Agostini ^{1,2,*}, Santiago J. E. Velazco ^{2,3}, J. Ariel Insaurralde ², Romina Pavé ⁴, Ingrid Holzmann ⁵, Eduardo Fernández-Duque ⁶, M. Paula Tujague ^{2,7}, Silvana Peker ⁸, Martín M. Kowalewski ⁹ and Mario S. Di Bitetti ^{2,7}

¹ CENAC (Parque Nacional Nahuel Huapi-CONICET), San Carlos de Bariloche, Río Negro, Argentina. agostini.ilaria@gmail.com

² Instituto de Biología Subtropical (IBS) (CONICET-Universidad Nacional de Misiones), Puerto Iguazú, Misiones, Argentina.

³ Programa de Pós-Graduação em Biodiversidade Neotropical, Universidade Federal da Integração Latino-Americana (UNILA), Foz do Iguaçu, Brazil.

⁴ Instituto Nacional de Limnología (INALI) (CONICET-Universidad Nacional del Litoral), Santa Fe, Santa Fe, Argentina.

⁵ Instituto de Bio y Geociencias del NOA (IBIGEO) (CONICET-Universidad Nacional de Salta), Salta, Argentina.

⁶ Department of Anthropology and School of the Environment, Yale University, New Haven, CT, USA.

⁷ Facultad de Ciencias Forestales, Universidad Nacional de Misiones, Eldorado, Misiones, Argentina.

⁸ Ministerio de Ambiente y Desarrollo Sustentable de la Nación, Buenos Aires, Argentina.

⁹ Estación Biológica de Corrientes (EBCo)-CECOAL (CONICET-Universidad Nacional del Nordeste), San Cayetano, Corrientes, Argentina.

* Correspondence: agostini.ilaria@gmail.com; Tel.: 0054-9-3757-505475

Figure S1. Zonation outputs of priority areas for primates of Argentina (AICPA), from white (low priority) to black (high priority). Map based on nominal estimates from species distribution models (above) and map based on 0.3SD (standard deviation) uncertainty of models (below).

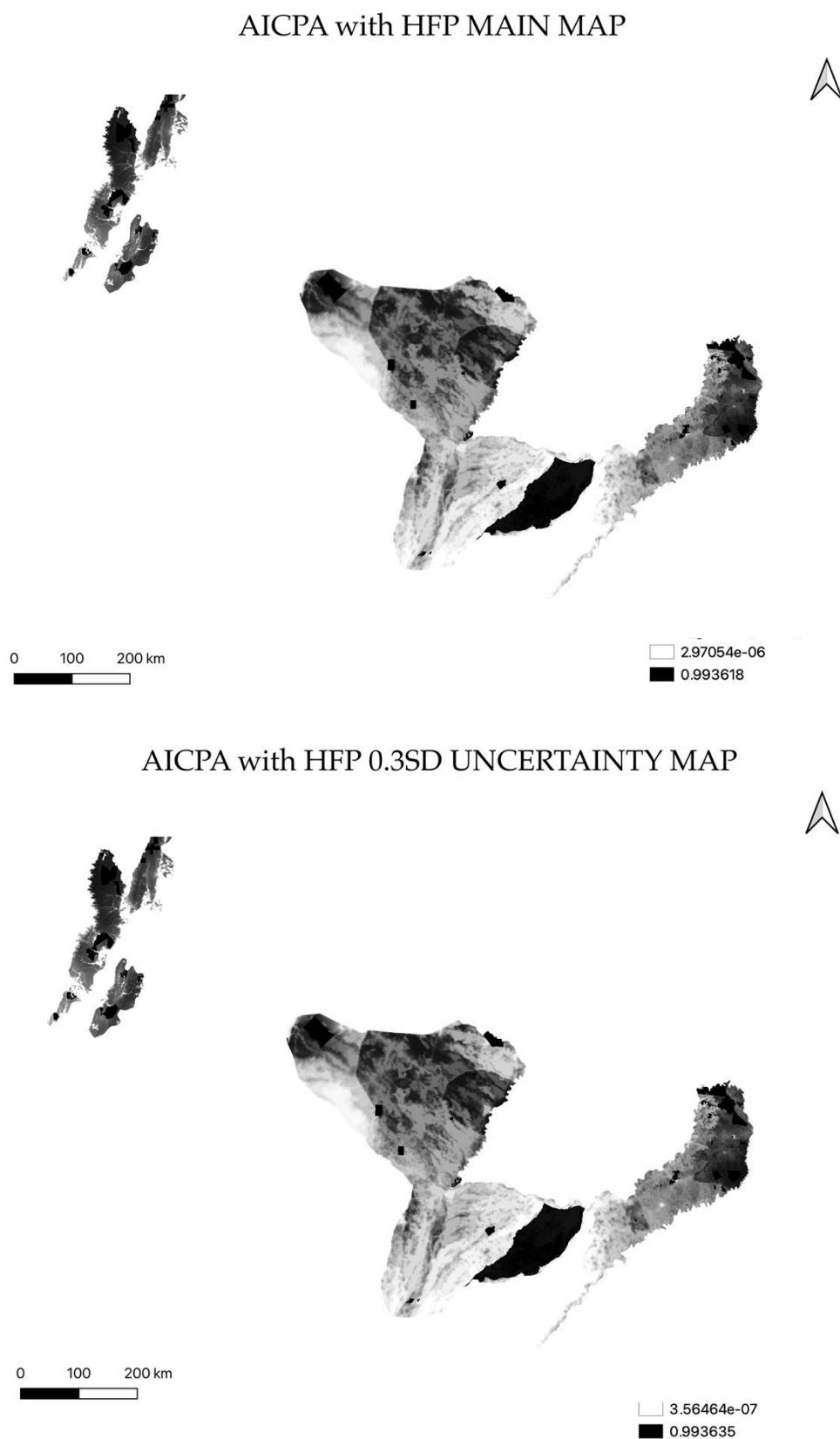


Table S1. List of the 13 expert primatologists (in alphabetical order of surnames) involved in reviewing the process and outputs of modeling species distribution and prioritization analysis.

Name and surname	Institution
Ilaria Agostini	CENAC (Parque Nacional Nahuel Huapi-CONICET), San Carlos de Bariloche, Río Negro, Argentina.
María Celia Baldovino	Asociación Civil Centro de Investigaciones del Bosque Atlántico (CeIBA), Puerto Iguazú, Misiones, Argentina.
Melina Brividoro	Centro de Estudios Parasitológicos y de Vectores (CEPAVE), CONICET-Universidad Nacional de La Plata, La Plata, Argentina.
Mario Di Bitetti	Instituto de Biología Subtropical (IBS), CONICET-Universidad Nacional de Misiones, Puerto Iguazú, Misiones, Argentina.
Eduardo Fernandez-Duque	Department of Anthropology and School of the Environment, Yale University, New Haven, CT, USA.
Martín Kowalewski	Estación Biológica de Corrientes (EBCo)-CECOAL, CONICET-Universidad Nacional del Nordeste, San Cayetano, Corrientes, Argentina.
Ingrid Holzmann	Instituto de Bio y Geociencias del NOA (IBIGEO) (CONICET-Universidad Nacional de Salta), Salta, Argentina.
Luciana Oklander	Instituto de Biología Subtropical (IBS), CONICET-Universidad Nacional de Misiones, Posadas, Misiones, Argentina.
Romina Pavé	Instituto Nacional de Limnología (INALI), CONICET-Universidad Nacional del Litoral, Santa Fe, Santa Fe, Argentina.
Silvana Peker	Ministerio de Ambiente y Desarrollo Sustentable de la Nación, Buenos Aires, Argentina.
Romina Pföh	Asociación Civil Centro de Investigaciones del Bosque Atlántico (CeIBA), Puerto Iguazú, Misiones, Argentina.
Marcelo Rotundo	Proyecto Mirikiná y Fundación E.C.O., Formosa, Formosa, Argentina.
Maria Paula Tujague	Instituto de Biología Subtropical (IBS), CONICET-Universidad Nacional de Misiones, Puerto Iguazú, Misiones, Argentina.

Table S2. Environmental variables used to model potential species distribution of primates in Argentina.

Variables	Unit of measurement
Annual mean temperature (BIO1)	°C
Mean Diurnal Range (BIO2)	°C
Isothermality (BIO3)	°C
Temperature seasonality (BIO4)	-
Max temperature of warmest month (BIO5)	°C
Min temperature of coldest month (BIO6)	°C
Temperature annual range (BIO7)	°C
Mean temperature of wettest quarter (BIO8)	°C
Mean temperature of driest quarter (BIO9)	°C
Mean temperature of warmest quarter (BIO10)	°C
Mean temperature of coldest quarter (BIO11)	°C
Annual precipitation (BIO12)	mm
Precipitation of wettest month (BIO13)	mm
Precipitation of driest month (BIO14)	mm
Precipitation seasonality (BIO15)	-
Precipitation of wettest quarter (BIO16)	mm
Precipitation of driest quarter (BIO17)	mm
Precipitation of warmest quarter (BIO18)	mm
Precipitation of coldest quarter (BIO19)	mm
Distance to water bodies*	m

* this variable was generated.

Table S3. Variance and cumulative variance explained by the principal components selected from the Analysis of Principal Components performed with the environmental variables.

Principal component	Explained variance	Explained cumulative variance
Comp.1	0.515	0.515
Comp.2	0.200	0.715
Comp.3	0.137	0.852
Comp.4	0.055	0.907
Comp.5	0.045	0.952

Table S4. Coefficient of original bioclimatic variable regarding the first five principal components used as predictors to construct species distribution models.

Variables	PC 1	PC 2	PC 3	PC 4	PC 5
Bio_1	0.294	0.036	0.236	0.015	0.043
Bio_2	-0.273	-0.128	0.120	0.007	-0.079
Bio_3	0.148	-0.318	-0.220	-0.116	0.438
Bio_4	-0.241	0.229	0.212	-0.061	-0.305
Bio_5	0.244	0.053	0.370	-0.058	-0.158
Bio_6	0.314	-0.014	0.091	-0.053	0.103
Bio_7	-0.276	0.075	0.208	0.031	-0.320
Bio_8	0.242	0.080	0.345	0.150	-0.006
Bio_9	0.303	-0.009	0.114	-0.132	0.091
Bio_10	0.252	0.120	0.342	-0.035	-0.101
Bio_11	0.310	-0.041	0.117	0.000	0.108
Bio_12	0.224	0.202	-0.310	0.154	-0.217
Bio_13	0.249	0.011	-0.293	0.265	-0.292
Bio_14	-0.025	0.458	-0.148	-0.241	0.199
Bio_15	-0.041	-0.467	-0.026	0.133	-0.102
Bio_16	0.251	0.015	-0.289	0.270	-0.291
Bio_17	-0.019	0.460	-0.154	-0.235	0.200
Bio_18	-0.052	0.341	-0.027	0.634	0.218
Bio_19	0.183	0.010	-0.269	-0.484	-0.429

Table S5. List of the variables and their relative weight used to build the human footprint raster layer that was introduced as a potential cost into the prioritization analysis. The variables and their weights were selected by experts based on current knowledge about the main anthropogenic factors affecting primates in Argentina. The road network was obtained by Open Street Maps data and included the following categories: *trunk*, *primary*, *secondary*, *tertiary*, *unclassified* and *track*. Human population density per pixel was obtained by census radius data according to the National Census of Population and Housing 2010 – INDEC. Maps of forest cover, forest plantations, agriculture and pastures were obtained by MapBiomas Chaco Colección 1 – 2017.

N	Input variables	Weight
1	Weighted Road network	0.9
2	Human population distributed per pixel	0.7
3	Pasture cover	0.9
4	Forest plantation cover	0.7
5	Agriculture cover	0.5
6	Native forest cover	0.3