Supplementary Information of

HIStory of LAND transformation by humans in South America (HISLAND-SA): annual and 1-km crop-specific gridded data (1950-2020)

Binyuan Xu[1, 2], Hanqin Tian[1, 3], Shufen Pan[1, 4], Xiaoyong Li[1, 5], Ran Meng[6, 13], Óscar Melo[7], Anne McDonald[8], María de los Ángeles Picone[9], Xiao-Peng Song[10], Edson Severnini[1], Katharine G. Young[11], Feng Zhao[12]

[1] Center for Earth System Science and Global Sustainability (CES[3]), Schiller Institute for Integrated Science and Society, Boston College, Chestnut Hill, MA 20467, USA
[2] College of Resources and Environment, Huazhong Agricultural University, Wuhan 430000, China
[3] Department of Earth and Environmental Sciences, Boston College, Chestnut Hill, MA 02467, USA
[4] Department of Engineering, Boston College, Chestnut Hill, MA 02467, USA
[5] School of Civil Engineering and Geomatics, Shandong University of Technology, Zibo 255000, China
[6] School of Computer Science and Technology, Harbin Institute of Technology, Harbin 150006, China
[7] Centro de Cambio Global UC, Dept. of Agricultural Economics, Pontificia Universidad Católica de Chile, Vicuña Mackenna 4860, Santiago 7820436, Chile.
[8] Graduate School of Global Environmental Studies, Sophia University, Tokyo 102-8554, Japan
[9] Department of History, Boston College, Chestnut Hill, MA 02467, USA
[10] Department of Geographical Sciences, University of Maryland, College Park, MD 20742, USA
[11] Boston College Law School, Boston, MA 02459, USA
[12] Key Laboratory of Sustainable Forest Ecosystem Management-Ministry of Education; College of Forestry, Northeast Forestry University, Harbin 150040, China
[13] National Key Laboratory of Smart Farm Technologies and Systems, Harbin, Heilongjiang 150006, China

Correspondence to: Hanqin Tian (hanqin.tian@bc.edu)

Table S1. Detailed information of inventory datasets used in this study.

Country	Data type	Resolution	Period	Item	Source
Argentina	Crop type	National	1947, 1952, 1970, 1980, 1990, 1995, 2000, 2011	10 crops	**Censo Nacional Agropecuario 1952:** https://www.patagonia3mil.com.ar/wp-content/uploads/libros/publicaciones-Decires.pdf.
			1960	crops	**Censo Nacional Agropecuario 1960:** https://biblioteca.indec.gob.ar/cgi-bin/wxis.exe/iah/scripts/?IsisScript=iah.xis&lang=es&base=minde&nextAction=lnk&exprSearch=CERDOS&indexSearch=DD#:~:text=Autor%20Institucional%3A%20Argentina.%20Direcci%C3%B3n%20Nacional%20de%20Estad%C3%ADstica%20y,Fe%2C%20Santiago%20del%20Estero%2C%20Tucum%C3%A1n%2C%20Tierra%20del%20Fuego.
			1969 - 2022	crops	**Agricultural Estimates: FAO based** https://datosestimaciones.magyp.gob.ar/reportes.php?reporte=Estimaciones
			1961-2021	crops	**FAO:** https://www.fao.org/faostat/zh/#data/QCL
		State	1960	crops	**Censo Nacional Agropecuario 1960:** https://biblioteca.indec.gob.ar/cgi-bin/wxis.exe/iah/scripts/?IsisScript=iah.xis&lang=es&base=minde&nextAction=lnk&exprSearch=CERDOS&indexSearch=DD#:~:text=Autor%20Institucional%3A%20Argentina.%20Direcci%C3%B3n%20Nacional%20de%20Estad%C3%ADstica%20y,Fe%2C%20Santiago%20del%20Estero%2C%20Tucum%C3%A1n%2C%20Tierra%20del%20Fuego.
			1969 - 2022	crops	**Agricultural Estimates: FAO based** https://datosestimaciones.magyp.gob.ar/reportes.php?reporte=Estimaciones
			1988	crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps

			2002	crops	**Censo Nacional Agropecuario 2002:** https://sitioanterior.indec.gob.ar/cna_index.asp
			2008	crops	**Censo Nacional Agropecuario 2008:** https://microdata.fao.org/index.php/catalog/1610/related-materials
			2018	crops	**Censo Nacional Agropecuario 2018:** https://www.indec.gob.ar/indec/web/Nivel4-Tema-3-8-87
		Municipal	1960	crops	**Censo Nacional Agropecuario 1960:** https://biblioteca.indec.gob.ar/cgi-bin/wxis.exe/iah/scripts/?IsisScript=iah.xis&lang=es&base=minde&nextAction=lnk&exprSearch=CERDOS&indexSearch=DD#:~:text=Autor%20Institucional%3A%20Argentina.%20Direcci%C3%B3n%20Nacional%20de%20Estad%C3%ADstica%20y,Fe%2C%20Santiago%20del%20Estero%2C%20Tucum%C3%A1n%2C%20Tierra%20del%20Fuego.
			1969 - 2022	crops	**Agricultural Estimates:** https://datosestimaciones.magyp.gob.ar/reportes.php?reporte=Estimaciones
			2008	crops	**Censo Nacional Agropecuario 2008:** https://microdata.fao.org/index.php/catalog/1610/related-materials
			2018	crops	**Censo Nacional Agropecuario 2018:** https://www.indec.gob.ar/indec/web/Nivel4-Tema-3-8-87
	Land use	National	1961-2021	Cropland, pasture, forest	FAO: https://www.fao.org/faostat/zh/#data/RL
		State	1960	Cropland, pasture, forest	**Censo Nacional Agropecuario 1960:** https://biblioteca.indec.gob.ar/cgi-bin/wxis.exe/iah/scripts/?IsisScript=iah.xis&lang=es&base=minde&nextAction=lnk&exprSearch=CERDOS&indexSearch=DD#:~:text=Autor%20Institucional%3A%20Argentina.%20Direcci%C3%B3n%20Nacional%20de%20Estad%C3

					%ADstica%20y,Fe%2C%20Santiago%20del%20Estero%2C%20Tucum%C3%A1n%2C%20Tierra%20del%20Fuego.
			2002	Cropland, pasture, forest	**Censo Nacional Agropecuario 2002: https://sitioanterior.indec.gob.ar/cna_index.asp**
			2008	Cropland, pasture, forest	**Censo Nacional Agropecuario 2008:** https://microdata.fao.org/index.php/catalog/1610/related-materials
			2018	Cropland, pasture, forest	**Censo Nacional Agropecuario 2018:** https://www.indec.gob.ar/indec/web/Nivel4-Tema-3-8-87
		Municipal	1960	Cropland, pasture, forest	**Censo Nacional Agropecuario 1960:** https://biblioteca.indec.gob.ar/cgi-bin/wxis.exe/iah/scripts/?IsisScript=iah.xis&lang=es&base=minde&nextAction=lnk&exprSearch=CERDOS&indexSearch=DD#:~:text=Autor%20Institucional%3A%20Argentina.%20Direcci%C3%B3n%20Nacional%20de%20Estad%C3%ADstica%20y,Fe%2C%20Santiago%20del%20Estero%2C%20Tucum%C3%A1n%2C%20Tierra%20del%20Fuego.
			2008	Cropland, pasture, forest	**Censo Nacional Agropecuario 2008:** https://microdata.fao.org/index.php/catalog/1610/related-materials
			2018	Cropland, pasture, forest	**Censo Nacional Agropecuario 2018:** https://www.indec.gob.ar/indec/web/Nivel4-Tema-3-8-87
Bolivia	Crop type	State	1950	crops	**Censo Nacional Agropecuario 1950:** https://es.scribd.com/doc/152215679/I-Censo-Agropecuario1950?doc_id=152215679&download=true&order=611811074#
			1984-2022	crops	**Instituto Nacional de Estadistica:** https://www.ine.gob.bo/index.php/estadisticas-economicas/agropecuaria/agricultura-cuadros-estadisticos/#
			1995	crops	**AgroMaps:**

					https://gaez.fao.org/pages/agromaps
		Municipal	1950	crops	**Censo Nacional Agropecuario 1950:** https://es.scribd.com/doc/152215679/I-Censo-Agropecuario1950?doc_id=152215679&download=true&order=611811074#
		National			
	Land use	State	1950	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 1950:** https://es.scribd.com/doc/152215679/I-Censo-Agropecuario1950?doc_id=152215679&download=true&order=611811074#
			1984	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 1984:** https://www.scribd.com/doc/152218425/II-Censo-Agropecuario-1984
			2013	cropland	**Censo Nacional Agropecuario 2013:** https://www.scribd.com/document/652777940/Censo-Agropecuario-Bolivia-Final
		Municipal	1950	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 1950:** https://es.scribd.com/doc/152215679/I-Censo-Agropecuario1950?doc_id=152215679&download=true&order=611811074#
		State	2017 - 2020	crops	**Companhia Nacional de abastecimiento do Brazil (Conab)**
Brazil	Crop type	National	1940 - 1970	crops	https://sidra.ibge.gov.br/pesquisa/censo-agropecuario/censo-agropecuario-1995-1996
		State	1970 - 2017	crops	https://sidra.ibge.gov.br/pesquisa/censo-agropecuario/censo-agropecuario-1995-1996 https://www.ibge.gov.br/en/statistics/economic/agriculture-forestry-and-fishing/21929-2017-2017-censo-agropecuario-en.html
Chile	Crop type	State	1997	crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
			2007	crops	**Censo Nacional Agropecuario 2007:**

					https://www.ine.gob.cl/estadisticas/economia/agricultura-agroindustria-y-pesca/censos-agropecuarios
		Municipal	2007	crops	**Censo Nacional Agropecuario 2007:** https://www.ine.gob.cl/estadisticas/economia/agricultura-agroindustria-y-pesca/censos-agropecuarios
		State	1997	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 1997: https://www.fao.org/world-census-agriculture/wcarounds/wca2000/wca2000-country0/en/**
	Land use		2007	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 2007:** https://www.ine.gob.cl/estadisticas/economia/agricultura-agroindustria-y-pesca/censos-agropecuarios
			1976, 1997, 2007	Pasture	**Structural changes in Chilean agriculture:** https://www.ine.gob.cl/estadisticas/economia/agricultura-agroindustria-y-pesca/censos-agropecuarios
			2021	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 2021:** https://www.ine.gob.cl/estadisticas/economia/agricultura-agroindustria-y-pesca/censos-agropecuarios
		Municipal	2007	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 2007:** https://www.ine.gob.cl/estadisticas/economia/agricultura-agroindustria-y-pesca/censos-agropecuarios
Colombia	Crop type	State	1960	crops	**Censo Nacional Agropecuario 1960:** https://www.dane.gov.co/index.php/estadisticas-por-tema/agropecuario/censos-agropecuarios-de-colombia-1960-1970
			1996, 2000	crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
			2011-2019	crops	**National agricultural survey (historical time series):** https://www.dane.gov.co/index.php/estadisticas-por-tema/agropecuario/encuesta-nacional-agropecuaria-ena
	Land use	State	1960	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 1960:** https://www.dane.gov.co/index.php/estadisticas-por-tema/agropecuario/censos-agropecuarios-de-colombia-1960-1970

			1970	Cropland, Pasture	**Censo Nacional Agropecuario 1970:** https://www.dane.gov.co/index.php/estadisticas-por-tema/agropecuario/censos-agropecuarios-de-colombia-1960-1970
			2011-2019	Cropland, Pasture, Forest	**National agricultural survey (historical time series):** https://www.dane.gov.co/index.php/estadisticas-por-tema/agropecuario/encuesta-nacional-agropecuaria-ena
		Municipal	1960	Cropland, Pasture, Forest	**Censo Nacional Agropecuario 1960:** https://www.dane.gov.co/index.php/estadisticas-por-tema/agropecuario/censos-agropecuarios-de-colombia-1960-1970
Ecuador	Crop type	State	1995	crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
			2000	Crops No wheat	**Resultados_Nacionales_con_resumenes_Provinciales_2000:** https://www.ecuadorencifras.gob.ec/censo-nacional-agropecuario/
			2022	Crops	**ESPAC_2022:** https://www.ecuadorencifras.gob.ec/estadisticas-agropecuarias-2/
	Land use	State	2000	Cropland, Pasture, Forest	**Resultados_Nacionales_con_resumenes_Provinciales_2000:** https://www.ecuadorencifras.gob.ec/censo-nacional-agropecuario/
			2022	Cropland, Pasture, Forest	**ESPAC_2022:** https://www.ecuadorencifras.gob.ec/estadisticas-agropecuarias-2/
Guyana	Crop type	National	1960-2016	Rice	**Annual report 2016 and Semple Agricultural Change:** https://grdb.gy/category/annual-reports/
		State	1994	Rice	**AgroMaps:** https://gaez.fao.org/pages/agromaps
			2007-2016	Rice	**Annual report:** https://grdb.gy/category/annual-reports/

			1991	crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
Paraguay	Crop type	State	2000-2021	Crops	**INE 2000-2021:** https://www.ine.gov.py/publicacion/16/anuario
			2008	Crops	**Agricultural census 2008: PRY_SPA_REP.VOL1** https://www.fao.org/world-census-agriculture/wcarounds/wca2010/countries2010/en/
			2022	Crops	**Agricultural census 2022:** https://www.fao.org/world-census-agriculture/wcarounds/wca2010/countries2010/en/
			2008	Cropland, Pasture, Forest	**Agricultural census 2008: PRY_SPA_REP.VOL1** https://www.fao.org/world-census-agriculture/wcarounds/wca2010/countries2010/en/
	Land use	State	2022	Cropland, Pasture, Forest	**Agricultural census 2022:** https://www.fao.org/world-census-agriculture/wcarounds/wca2010/countries2010/en/
			1929	Crops	**Agricultural census 1929:** https://www.scribd.com/document/360750048/1972-Honorio-Pinto-El-Primer-Censo-Agropecuario-Del-Peru-1929
Peru	Crop type	State	1993	crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
			2012	Cropland, Pasture, Forest	**Agricultural census 2012:** https://microdata.fao.org/index.php/catalog/1616/related-materials
	Land use	State	1995	Crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
Suriname	Crop type	State	2008	Crops	**Agricultural census 2008:** https://www.fao.org/world-census-agriculture/wcarounds/wca2010/countries2010/en/
			1995	Crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
	Land use	State	2008	Cropland,	**Agricultural census 2008:**

				Pasture, Forest	https://www.fao.org/world-census-agriculture/wcarounds/wca2010/countries2010/en/
Uruguay	Crop type	State	1990, 2000	Crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps
Venezuela	Crop type	State	1995	Crops	**AgroMaps:** https://gaez.fao.org/pages/agromaps