

URUGUAY National GHG Inventory

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Methods and main parameters to estimate land use GHG emissions

Land classification, main definitions, methods and parameters

2006 IPCC Guidelines
IPCC Land uses and land use conversions
33 Land subdivisions according to national circumstances
Approach 2 to represent areas of land use
100% managed land
100% mineral soils
Activity data 1970-2000: national statistics
Activity data 2000-2020: Collect Earth
Forest Land: native forest + forest plantations (FAO definition of forest)
Grassland: natural grassland + implanted pastures
Cropland: annual + perennial
Carbon pools: Living biomass (AGB+BGB), Dead Organic Matter (Litter), Soil Organic Matter
Harvested Wood Products (HWP): Not Estimated; included in the NGHGI improvement plan
Biomass Gain-Loss Method is applied for estimating biomass gains and losses

Table 1: Methods and main parameters used to estimate GHG emissions

Category	Sub-category	Methods	Main Parameters
Forest Land	FF / LF	T1 / T2	Forest growth: Country specific ¹
Cropland	CC / LC		Basic wood density: Country specific ¹
Grassland	GG / LG		Carbon in biomass: Country specific ¹
Settlement	SS / LS		Annual harvest: National statistics ¹
Other Land	OO / LO		SOC _{net} : National statistics ²
Wetland	WW / LW	NE ³	Other parameters: IPCC 2006

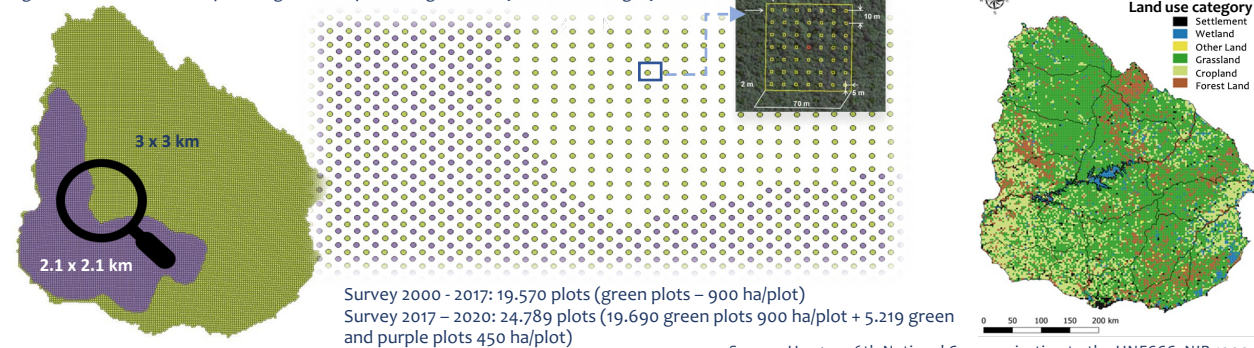
¹ National Forest Directorate, Ministry of Livestock, Agriculture and Fisheries

² SOC Map, National Natural Resources Directorate, Ministry of Livestock, Agriculture and Fisheries

³ NE: Not Estimated (included in NGHGI improvement plan)

Collect Earth to derive Activity Data

Figure 1: Collect Earth sample design and map showing results by land use category



Source: Uruguay 6th National Communication to the UNFCCC; NIR 1990-2020 (2023)

Results NGHGI LULUCF 1990-2020

Table 2: Land use and land use change matrix 1990-2020

INITIAL \ FINAL	Forest Land	Cropland	Grassland	Settlement	Wetland	Other Land	Final area (ha)
Forest Land	1.642.973	28.800	661.050			900	2.333.723
Cropland	12.150	1.751.530	1.957.950			900	3.722.530
Grassland	62.100	615.600	9.675.524	2.700		4.050	10.359.974
Settlement	3.600	5.400	26.100	323.261			358.361
Wetland					742.731		742.731
Other Land	900	900	8.100			75.611	85.511
Initial area (ha)	1.721.723	2.402.230	12.328.724	325.961	742.731	81.461	17.602.830
Net change	612.000	1.320.300	-1.968.750	32.400	0	4.050	

Table 3: GHG emissions / removals estimates, LULUCF, NGHGI 2020

Category	Forest Land		Cropland		Grassland		Wetland	Settlement	Other Land
Sub-category	FF	LF	CC	LC	GG	LG	WW/LW	LS	LO
Emissions / Removals (Gg CO2)	6.290	-18.372	168	2.796	-360	-392	NE	-18	-3
Net emissions / category (Gg CO2)	-12.082		2.964		-752		NE	-18	-3
Total net emissions (Gg CO2)	-9.891								

Source: Uruguay 6th National Communication to the UNFCCC; NIR 1990-2020 (2023)

Figure 2: Evolution of Cropland disaggregated by sub-category, 1990-2020

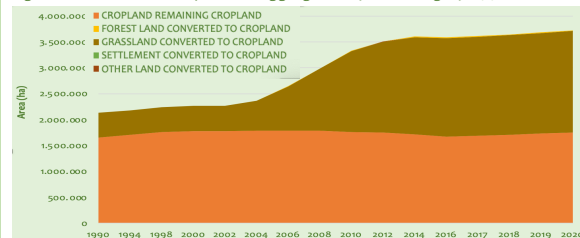


Figure 3: Evolution of GHG emissions in Cropland by carbon pool, 1990-2020

