

Project **zeroCarbon**

Information	Details
Standard	Plan Vivo Carbon Standard (PV Climate)
Standard version	Version 5.0
Methodology	PM001 - Agriculture and Forestry Carbon Benefit Assessment Methodology
Methodology Version	Version 1.0
Methodology Date	08/11/2023

Version	Date	Nature of revisions	Author
1	28/10/2023	First version submitted to validation	Guido Cencini
1.1	08/04/2024	Second version updated on the basis of the addition of participants until 2023. Addition of the sheet "Carbon project in time_general" to facilitate the reading of the model results.	Guido Cencini

Relevant

Relevant

General information per tab	
Sheet	Description
Carbon calculations	Carbon modelling per hectare and for tree species
Site index	Performance index (site index) useful for modelling the growth trend per hectare. Values taken from permanent plots in specific species by INAB (Instituto Nacional de Bosque de Guatemala) and zeroCO2 monitoring.
ANR carbon assessment	Estimation of Carbon Benefits associated to Assisted natural regeneration (ANR)
dSOCT _i	Carbon benefit from soil organic carbon increment due to project activities
Carbon Benefit Project	Dashboard with all pools and emission sources for the project species. Sheet serving as a double check with the values of "Carbon calculations"
Carbon project in time_general	Overall tables with values per hectare and per project for all project years. Suitable for all stakeholders.
Participants + Baseline stratification	List of participants and stratification of land use in the pre-project scenario up to the 2023 planting cohort
Monitoring	Sampling procedure and Stratification for monitoring following the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities"

STRATUM 1 - FORESTRY PLANTATION (FP)

CEDRO		Comparison										Comparison										*Conservatively excluded from carbon benefit										Carbon in Harvested Products					Emissions reduction results																																																																																																																																																																																																																																																																																																																																																																																																															
		Growth model 1					FAO					Chave model 1					winnecrow model					brown model					Additional benefits															ANR*																																																																																																																																																																																																																																																																																																																																																																																																										
Project start	Number of years	Volume of wood (Mg)	Carbon stock (Mg)	Height (m)	Wood area (ha)	Volume (Mg)	Annual increment (Mg)	Mean increment (Mg)	Business as Usual (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net increment (Mg)	Net 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SITE INDEX - INAB

Source : INAB permanent sample plots

1.
<https://www.inab.gob.gt/images/publicaciones/PTF%20CAOBA%20DE%20PETEN.pdf>
2.
<https://www.inab.gob.gt/images/publicaciones/PTF%20CEDRO.pdf>

CEDRO		CAOBA	
Location	Site Index	Location	Site Index
Petén, Santa Ana	10.67	Petén, Santa Ana	10.73
Petén, Santa Ana	8.29	Petén, Santa Ana	9.36
Petén, San Francisco	8.82	Petén, Flores	7.43
Petén, San Francisco	8.82	Petén, San Francisco	9.56
Petén, Poptun	10.67	Petén, San Francisco	9.79
Petén, Poptun	12.09	Petén, San Francisco	9.44
Petén, San Francisco	13.99	Petén, San Francisco	8.88
Petén, La Libertad	17.85	Petén, San Luis	12.99
Petén, Santa Josè	22.74	Petén, San Francisco	13.1
		Petén, San Luis	13.38
Average	12.66	13.52	10.47
Standard deviation	4.84		2.03

FIELD SITE INDEX - zeroCO2 monitoring

Source : field data collection

site index was calculated using sampling data for sites with at least 5 individuals measured per site

Site	indice sitio CAOBA	indice sitio CEDRO
1	17.971506	
2	15.136989	16.07907
3		16.942322
4	20.165557	17.001644
5	20.921274	19.360824
6		14.638826
7		
8	16.967834	
9	18.808229	
10	16.316501	
11	19.118748	
12		15.467379
13		15.505715
14	19.35847	
15	15.839362	14.363201
16	17.703794	
17	16.607592	13.851406
18	19.15958	14.50675
19		16.089144
20	20.77968	
21	22.95101	
AVG	18.52	15.80

INAB + FIELD DATA		
TOTAL AVERAGE	14.49	14.23

ASSISTED NATURAL REGENERATION (ANR)

Carbon assessment ***Conservatively excluded from carbon benefit**

cumulative					
Year	Trees / ha [n]	AMB trans/h [n]	Year AMB integration	CO2 (t/ha/yr)	CO2 (t/ha/yr)
1	1111	-	-	-	-
2	1000	-	-	-	-
3	1000	-	-	-	-
4	1000	25	1	0.02181	0.54516
5	900	25	2	0.04361	1.09032
6	900	35	3	0.06542	2.28968
7	900	35	4	0.08723	3.05291
8	900	45	5	0.1090	4.90646
9	600	55	6	0.1308	7.19614
10	600	55	7	0.1526	9.39549
11	600	55	8	0.1745	9.58495
12	600	65	9	0.1963	12.7568
13	300	65	10	0.2181	14.2006
14	300	75	11	0.2403	16.0208
15	300	75	12	0.2621	19.6953
16	300	75	13	0.2839	21.2918
17	300	75	14	0.3057	22.5272
18	300	75	15	0.3275	24.5627
19	300	75	16	0.3493	26.1982
20	300	75	17	0.3711	27.8337

Value retrieved from field inventory (available in annex)

FIELD INVENTORY YEAR 5

Species	Scientific name	DBH [cm]	DAP [m]	H [m]	AGB [kg/tree]	BOB [kg/tree]	C [kg/tree]	S [kg/tree]	CO2 [t/ha/yr]
Caulote	Guazuma ulmifolia	0.520	12.889	8.286	41.14	17.90	27.75	0.03	0.10
Chacaj Colorado	Bursaria simaruba	0.335	7.000	12.000	11.68	5.08	7.88	0.01	0.03
Cocche		0.500	7.800	7.000	12.60	5.48	8.50	0.01	0.03
Guayula	Psidium guajava	0.625	11.100	6.000	27.00	11.75	18.22	0.02	0.07
Jabin	Piscidia piscipula	0.590	13.800	10.000	63.89	27.80	43.09	0.04	0.16
Jabo	Spondias purpurea	0.350	13.000	6.000	20.75	9.03	13.99	0.01	0.05
Maitiguata	Tabebuia rosea	0.480	17.800	12.000	103.13	44.88	69.57	0.07	0.26
Quitain		0.500	5.498	7.750	7.03	3.06	4.74	0.00	0.02
Roble		0.500	10.414	8.000	25.24	10.98	17.02	0.02	0.06
Sigalla	Chrysophyllum mexicanum Brande	0.740	12.450	8.833	57.75	25.13	38.96	0.04	0.14
Temalopy	Zuelania guidone	0.563	11.975	10.667	49.38	21.45	33.24	0.03	0.12
Tiño	Haematebium campechianum	0.970	8.036	8.118	29.46	12.82	19.88	0.02	0.07
Yamogen	Lonchocarpus guatemalensis	0.640	14.100	11.500	82.67	35.98	55.77	0.06	0.20
Zapotillo	Pouteria reticulata	0.630	13.733	13.667	84.98	36.98	57.32	0.06	0.22

AVG CO2/ 6.1989

FIELD INVENTORY YEAR 10

Species	Scientific name	DBH [cm]	DAP [m]	H [m]	AGB [kg/tree]	BOB [kg/tree]	C [kg/tree]	S [kg/tree]	CO2 [t/ha/yr]
Amagala	Pseudobombax ellipticum	0.340	7.91	14.00	17.50	7.62	11.81	0.01	0.04
Bujón negro	Cardia alliodora	0.473	10.70	10.00	31.34	13.64	21.14	0.02	0.08
Catax	Sesuvium cubensis	0.910	4.71	13.00	15.40	6.79	10.52	0.01	0.04
Cudelo	Guazuma ulmifolia	0.520	11.24	9.79	37.06	16.13	25.00	0.02	0.09
Chacaj blanco		0.500	12.85	12.00	56.50	24.59	38.11	0.04	0.14
Chacaj Colorado	Bursaria simaruba	0.335	12.60	15.00	45.73	19.90	30.85	0.03	0.11
Chachen negro	Mecopium brownii	0.395	10.07	16.13	539.17	234.65	363.69	0.36	1.31
Corte	Tabebuia guayacan	0.835	26.50	14.00	445.02	193.68	300.19	0.30	1.10
Guano	Lycium sp	0.500	8.47	7.00	14.79	6.44	9.98	0.01	0.04
Guayupin	Daphia americana	0.500	10.80	8.50	28.75	12.51	19.39	0.02	0.07
Jabin	Piscidia piscipula	0.590	13.40	10.00	60.32	26.25	40.69	0.04	0.15
Jabo	Spondias purpurea	0.350	5.80	15.00	10.50	4.57	7.08	0.01	0.03
Jolot		0.500	6.31	10.00	11.79	5.13	7.95	0.01	0.03
Luand Blanco	Cardia alliodora	0.473	5.81	7.00	6.73	2.93	4.54	0.00	0.02
Madre cacao	Glicidia sapum	0.617	10.04	14.00	49.78	21.66	33.58	0.03	0.12
Mano de León	Oreopanax pebatius	0.500	10.53	7.67	24.75	10.77	16.70	0.02	0.06
Maitiguata	Tabebuia rosea	0.480	16.30	12.00	86.37	37.59	58.25	0.06	0.21
Pasac hembra	Simarouba amara	0.383	13.90	12.00	50.78	22.10	34.25	0.03	0.13
Patata	Theobroma bicolor	0.500	32.50	18.00	513.51	223.49	346.39	0.35	1.27
Picudoil	Faramea occidentalis	0.584	7.02	8.00	13.61	5.92	9.18	0.01	0.03
Saucu		0.500	7.90	7.00	12.92	5.62	8.71	0.01	0.03
Sosni hoja fina		0.500	8.38	3.00	6.33	2.76	4.27	0.00	0.02
Tratim	Lycium spp	0.684	11.21	8.00	39.58	17.23	26.70	0.03	0.10
Yanic	Vitex guianeri	0.560	8.13	7.00	15.27	6.65	10.30	0.01	0.04
Zunerte		0.500	16.00	10.00	72.55	31.58	48.24	0.05	0.18

AVG CO2/ 0.2188

LIST OF PROMOTED SPECIES

#	Species	Scientific name	Classification	CO2/ha	Use
1	Cebiba	Sweetiana macrophylla	Altamente I AAKOM	Moderable	
2	Cedro	Cedrela odorata	Altamente I AAKOM	Moderable	
3	Manchiche	Lonchocarpus castilloi	Actualment ACTCOM	Moderable	
4	Santa Maria	Calophyllum brasiliense	Actualment ACTCOM	Moderable	
5	Cebiba	Cebiba pentandra	Actualment ACTCOM	Moderable/cultural	
6	Amagala	Pseudobombax ellipticum	Actualment ACTCOM	Moderable	
7	Catalpa	Sesuvium cubensis	Actualment ACTCOM	Moderable/ecológico	
8	Jabin	Piscidia piscipula	Potentialm POTCOM	Moderable	
9	Canxan	Terminalia amazonia	Actualment ACTCOM	Moderable	
10	Rosul	Dalbergia retusa	Altamente I AAKOM	Moderable	
11	Jobilo	Actinonium graveolens	Actualment ACTCOM	Moderable	
12	Granadillo	Platymiscium yucatanum	Actualment ACTCOM	Moderable	
13	Hornigo	Platymiscium dimorphandru	Actualment ACTCOM	Moderable	
14	Madre cacao	Glicidia sapum	Potentialm POTCOM	Moderable	
15	Tinto	Haematebium campechian	Potentialm POTCOM	Moderable	
16	Tratim	Lyciuma lasiliquum	Actualment ACTCOM	Moderable	
17	Guano	Lyciuma aucupiaense	Actualment ACTCOM	Moderable	
18	Saucu	Bourneria onophylla	Actualment ACTCOM	Moderable	
19	Mano de leon	Dendropanax arboreus	Actualment ACTCOM	Moderable	
20	Malerio color	Aspidosperma megacarpus	Actualment ACTCOM	Moderable	
21	Malerio blanco	Aspidosperma staggereris	Actualment ACTCOM	Moderable	
22	Danto	Vatanea lundellii	Actualment ACTCOM	Moderable	
23	Chachen negn	Mecopium brownii	Actualment ACTCOM	Moderable	
24	Maitiguata	Tabebuia rosea	Potentialm POTCOM	Moderable	
25	Ramon onaja	Brosimum alcastrum	Potentialm POTCOM	Moderable/ecológico	
26	Ramon onaja	Brosimum alcastrum	Potentialm POTCOM	Moderable/ecológico	
27	Chichigato	Accoum panamensis	Actualment ACTCOM	Moderable	
28	Oviro	Ormosia tishmenis	Actualment ACTCOM	Moderable	
29	Cola de coche	Crobia arborea	Actualment ACTCOM	Moderable	
30	Guacban	Pithecolitium leucocalyx	Actualment ACTCOM	Moderable	
31	Irnyol	Chlorophora excelsa	SIN VALOR SINVAL	Moderable	
32	Copal	Protium copal	SIN VALOR SINVAL	Cultural	
33	Sigalla	Chrysophyllum mexicanum	SIN VALOR SINVAL	Ecológico	
34	Sacante	Hyphorham frutescens	SIN VALOR SINVAL	Ecológico	
35	Yamogen	Lonchocarpus guatemalensis	SIN VALOR SINVAL	Ecológico	
36	Oxhat	Pithecolitium tondalii	SIN VALOR SINVAL	Ecológico	
37	Charaj	Bursaria simaruba	SIN VALOR SINVAL	Ecológico	
38	Quinin	Spondias spp	SIN VALOR SINVAL	Ecológico	
39	Pasac Hembra	Simarouba glauca	SIN VALOR SINVAL	Ecológico	
40	Anona	Annona diversifolia	SIN VALOR SINVAL	Ecológico	
41	Rojin	Cardia gracilarthes	SIN VALOR SINVAL	Ecológico	
42	Caniste	Pouteria campechiana	SIN VALOR SINVAL	Ecológico	
43	Pinierita	Pimenta dioica	Protegida	Protegida	Producción de resina para chicle
44	Chico zapote	Mantlura zapota	Protegida	Protegida	

Parameter	Symbol	Value	Source (SOC estimation tool, V01.1.0)	Note
Reference SOC (tC/ha)	SOCREF,i	65	Table 3: HAC soils, Tropical moist.	
Land use factor	fLU ,i	0.86	Table 4. Cropland: 0.57. 68 % of baseline land use Table 6 Grassland: 1. 32 %of baseline land use	
Management factor	fMG,i	1.01	Table 6 Grassland 0.97: Overgrazed or moderately degraded grassland, with somewhat reduced productivity (relative to the native or nominally managed grassland) and receiving no management inputs 39.6 %	
Input factor	fIN,i	0.97	Table 5: Cropland: 0.92. low nutrient input in tropical moist/wet climate region Table 6: Grassland: 1. low nutrient input in tropical moist/wet climate region	

SOCINITIAL,i	54.86	
SOCLOSS,i	0.00	
dSOCT,i	0.51	t C ha-1 year-1
	1.86	t CO2 ha-1 year-1

Baseline scenario				Value		
Baseline scenario	Stratum	Area (ha)	Area (%)	fIN,i	fLU ,i	fMG,i
Pastureland	I	297.03	67.8%	1	1	0.97
Cropland with fallow period - "Guamii	II	140.97	32.2%	0.92	0.57	1.08
Total		438.00	100%			

Source A/R Methodological ToolTool for estimation of change in soil organic carbon stocks due to theimplementation of A/R CDM project activitiesi

$$dSOC_{i,j} = \frac{SOC_{REF,i} - (SOC_{INITIAL,i} - SOC_{LOSS,i})}{20\; years} \quad \text{for } t_{PREP,i} < t \leq t_{PREP,i} + 20 \quad (13)$$

where:

$dSOC_{i,j}$ The rate of change in SOC' stock in stratum *i* of the areas of land, in year *t*; t C ha⁻¹ yr⁻¹

$t_{PREP,i}$ The year in which first soil disturbance takes place in stratum *i* of the areas of land

$SOC_{LOSS,i}$ Loss of SOC caused by soil disturbance attributable the A/R CDM project activity, in stratum *i* of the areas of land; t C ha⁻¹

$SOC_{REF,i}$ Reference SOC stock corresponding to the reference condition in native lands (i.e. non-degraded, unimproved lands under native vegetation – normally forest) by climate region and soil type applicable to stratum *i* of the areas of land; t C ha⁻¹

$SOC_{INITIAL,i}$ SOC stock at the beginning of the A/R CDM project activity in stratum *i* of the areas of land; t C ha⁻¹

i 1, 2, 3, ... strata of areas of land; dimensionless

t 1, 2, 3, ... years elapsed since the start of the A/R CDM project activity

$$SOC_{INITIAL,i} = SOC_{REF,i} * f_{LU,i} * f_{MG,i} * f_{IN,i}$$

where:

$SOC_{INITIAL,i}$ SOC stock at the beginning of the A/R CDM project activity in stratum *i* of the areas of land; t C ha⁻¹

$SOC_{REF,i}$ Reference SOC stock corresponding to the reference condition in native lands (i.e. non-degraded, unimproved lands under native vegetation – normally forest) by climate region and soil type applicable to stratum *i* of the areas of land; t C ha⁻¹

$f_{LU,i}$ Relative stock change factor for baseline land-use in stratum *i* of the areas of land; dimensionless

$f_{MG,i}$ Relative stock change factor for baseline management regime in stratum *i* of the areas of land; dimensionless

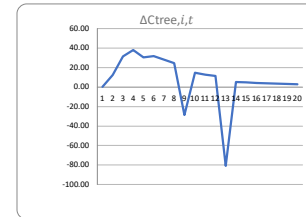
$f_{IN,i}$ Relative stock change factor for baseline input regime (e.g. crop residue returns, manure) in stratum *i* of the areas of land; dimensionless

i 1, 2, 3, ... strata of areas of land; dimensionless

1- Forest plantation (FP)

Project	Calendar	Project
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Intervention	Species	Variables (ton ha ⁻¹ 20 years)		
		Change in SOC	Dead wood	Litter
1 - FP	Caoba	37.19	0.81	0.81
	Cedro	37.19	1.56	1.56



1- Forest plantation (FP)

Project	Calendar	Project
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Intervention	Species	Variables (ton ha ⁻¹ 20 years)		
		Change in SOC	Dead wood	Litter
1 - FP	Caoba	37.19	0.81	0.81
	Cedro	37.19	1.56	1.56



Participants 2020 - 2023 & Baseline

Starting date	Name of project participant	Community name	Type of participant	Municipality	Project intervention	Land and Natural Resource Use (before zeroCARBON)	Quantity (Plants)	# Casba	# Cedro	Somma of Extent of project area (ha) set	ha Casba	ha Cedro	PVCs
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.5	0.23	0.23	101	
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.5	0.23	0.23	101	
2020													
2020	Group	La Libertad	FP - Forest Plantation	Agriculture	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Group	La Libertad	FP - Forest Plantation	Pastureland	500	250	250	0.5	0.23	0.23	101		
2020													
2020	Individual	Santa Ana	FP - Forest Plantation	Guamú joven	1111	555	556	1.0	0.50	0.50	0.50	225	
2020													
2020	Group	Santa Ana	FP - Forest Plantation	Pastureland	550	0	550	0.5	0.00	0.50	0.50	137	
2020													
2021	Individual	Las Cruces	FP - Forest Plantation	Pastureland	1345	400	945	1.2	0.36	0.85	0.95	298	
2021													
2021	Individual	Las Cruces	FP - Forest Plantation	Agriculture	4889	0	4889	1.1	0.00	4.13	1.445	345	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	800	0	800	0.7	0.00	0.72	0.20	137	
2021													
2021	Individual	Santa Ana	FP - Forest Plantation	Pastureland	550	0	550	0.5	0.00	0.50	0.50	137	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	2500	2500	0	2.3	2.25	0.00	388		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	600	0	600	0.5	0.00	0.54	0.50	150	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	La Libertad	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Guamú joven	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Guamú joven	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	400	0	400	0.4	0.00	0.36	0.100	100	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	2200	0	2200	2.0	0.00	1.98	0.469	469	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	La Libertad	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Flores	FP - Forest Plantation	Pastureland	5282	0	5282	4.8	0.00	4.75	1.318	1318	
2021													
2021	Group	La Libertad	FP - Forest Plantation	Agriculture	220	220	0	0.2	0.19	0.00	0.19	100	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	2222	2222	0	2.0	2.00	0.00	345		
2021													
2021	Individual	Flores	FP - Forest Plantation	Agriculture	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	2222	1105	1117	2.0	0.99	1.01	400		
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	875	0	875	0.9	0.47	0.42	198		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	988	519	469	0.9	0.47	0.42	198		
2021													
2021	Individual	La Libertad	FP - Forest Plantation	Agriculture	5068	2534	2534	4.6	2.28	2.28	1026		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	La Libertad	FP - Forest Plantation	Agriculture	987	0	987	0.4	0.36	0.00	62		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Group	La Libertad	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	989	520	469	0.9	0.47	0.42	198		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	La Libertad	FP - Forest Plantation	Pastureland	989	520	469	0.9	0.47	0.42	198		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	La Libertad	FP - Forest Plantation	Pastureland	229	0	229	0.2	0.2	0.00	21		
2021													
2021	Group	La Libertad	FP - Forest Plantation	Agriculture	60	0	60	0.1	0.05	0.00	9		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Group	La Libertad	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Individual	La Libertad	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	800	0	800	0.7	0.00	0.72	0.20	137	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	2222	2222	0	2.0	2.00	0.00	345		
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	988	520	469	0.9	0.47	0.42	198		
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	1050	375	675	0.9	0.34	0.61	227		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1250	0	1250	1.6	0.00	1.58	450		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	800	0	800	0.7	0.00	0.72	0.20	137	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	987	519	469	0.9	0.47	0.42	197		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	800	0	800	0.8	0.00	0.81	0.20	137	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1000	0	1000	0.9	0.00	0.90	0.50	250	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	989	520	469	0.9	0.47	0.42	198		
2021													
2021	Group	La Libertad	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Pastureland	2222	1105	1117	2.0	0.99	1.01	400		
2021													
2021	Individual	La Libertad	FP - Forest Plantation	Pastureland	2000	2000	0	1.8	1.80	0.00	310		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1111	1.0	0.00	1.00	0.77	277	
2021													
2021	Individual	Sayachee	FP - Forest Plantation	Agriculture	1050	375	675	0.9	0.34	0.61	227		
2021													
2021	Individual	La Libertad	FP - Forest Plantation	Pastureland	500	0	500	0.5	0.45	0.00	78		
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	555	556	1.0	0.50	0.50	0.50	225	
2021													
2021	Group	Santa Ana	FP - Forest Plantation	Pastureland	1111	0	1						

