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SUPPLEMENTARY MATERIALS

Supplementary material A. Natural habitat (NH) data in buffer zones (BZs) and external zones (EZs) according to landscape threshold percentages.

	Buffer Zone					**External Zone**				
Conservation Units (CU)	**1985 (% NH)**	**Creation of the CU (% NH)**	**Publication of the CU Management Plan (% NH)**	**2022 (% NH)**	**Landscape Condition in the BZ**	**1985 (% NH)**	**Creation of the CU (% NH)**	**Publication of the CU Management Plan (% NH)**	**2022 (% NH)**	**Landscape Condition in the EZ**
EEX	More than 60%	More than 60%	More than 60%	More than 60%	Excellent	More than 60%	More than 60%	More than 60%	More than 60%	Excellent
PECB	More than 60%	-	More than 60%	More than 60%	Excellent	More than 60%	-	More than 60%	More than 60%	Excellent
PECJ	More than 60%	-	More than 60%	More than 60%	Excellent	More than 60%	-	More than 60%	More than 60%	Excellent
PEI	More than 60%	More than 60%	More than 60%	More than 60%	Excellent	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good
PEJU	More than 60%	More than 60%	More than 60%	More than 60%	Excellent	More than 60%	More than 60%	More than 60%	More than 60%	Excellent
PEMCJ	More than 60%	More than 60%	More than 60%	More than 60%	Excellent	More than 60%	More than 60%	More than 60%	More than 60%	Excellent
PETAR	More than 60%	-	More than 60%	More than 60%	Excellent	Between 30% and 60%	-	Between 30% and 60%	Between 30% and 60%	Good
EEI	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good
FEG	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good
PEC	Between 30% and 60%	-	Between 30% and 60%	Between 30% and 60%	Good	Between 30% and 60%	-	Between 30% and 60%	Between 30% and 60%	Good
PECE	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	More than 60%	Good - Good - Good - Excellent
PEITB	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good

PEITG	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Between 30% and 60%	Good
PEJ	Between 30% and 60%	-	Between 30% and 60%	Between 30% and 60%	Good	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor
EEB	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Poor	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Poor
EEC	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor
EEJ	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor
FENNA	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Poor	Less than 10%	Less than 10%	Less than 10%	Less than 10%	Very Poor
PEA	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Poor	Less than 10%	Less than 10%	Less than 10%	Less than 10%	Very Poor
PEMD	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor	Between 10% and 30%	-	Less than 10%	Less than 10%	Poor - Very Poor - Very Poor
PEPF	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor	Less than 10%	-	Between 10% and 30%	Less than 10%	Very Poor - Poor - Very Poor
PERP	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Between 10% and 30%	Poor	Less than 10%	Less than 10%	Less than 10%	Less than 10%	Very Poor
PEV	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor	Between 10% and 30%	-	Between 10% and 30%	Between 10% and 30%	Poor
EERP	Between 10% and 30%	-	Less than 10%	Between 10% and 30%	Poor - Very Poor - Poor	Less than 10%	-	Less than 10%	Less than 10%	Very Poor
EEPF	Less than 10%	-	Less than 10%	Less than 10%	Very Poor	Less than 10%	-	Less than 10%	Less than 10%	Very Poor

Note: Conservation Units that exhibited changes in landscape conditions in the buffer zone or external zone during the analyzed time interval are highlighted in gray; Empty cells are related to Conservation Units created before 1985.

Supplementary material B. Land Use and Land Cover Transition Matrix in the PECE External Zone (2009–2022).

(In hectares)	2022												
2009	**Natural Habitat**	**Forest Plantation**	**Natural non Forest Formation**	**Pasture**	**Temporary Crops**	**Mosaic of Uses**	**Non Vegetated Area**	**Urban Area**	**Water**	**Perennial Crops**	**Soybean**	**Total 1985**	**Losses**
Natural Habitat	8,459.2	25.6	0.2	25.6	173.4	216.3	0.2	0.7	2.5	0.0	0.0	8,903.6	444.3
Forest Plantation	1.8	14.0	0.0	0.0	0.2	0.1	0.0	0	0.0	0.0	0.0	16.0	2.0
Natural non Forest Formation	0.1	0.0	6.3	0.0	0.1	0.4	0.0	0	0.0	0.0	0.0	6.9	0.6
Pasture	14.7	0.8	0.0	425.7	206.4	145.1	2.3	0	0.0	2.5	0.0	797.4	371.7
Temporary Crops	436.0	5.8	3.3	507.7	1021.4	375.4	2.5	0.4	21.5	3.5	0.0	2,377.3	1,356.0
Mosaic of Uses	696.3	15.1	5.0	356.8	760.9	1,617.6	8.9	16.7	7.0	0.9	0.8	3,485.9	1,868.3
Non Vegetated Area	0.0	0.0	0.0	0.0	1.5	1.5	1.6	0.1	0.0	0.0	0.0	4.7	3.1
Urban Area	0.0	0.0	0.0	0.0	0.0	0.1	0.0	120.1	0.0	0.0	0.0	120.2	0.1
Water	14.6	0.0	0.4	0.4	15.5	9.6	0	0.0	206.4	0.0	0.0	246.8	40.4
Total 2022	9,622.6	61.2	15.2	1,316.1	2,179.2	2,366.1	15.4	137.9	237.4	6.9	0.8	-	-
Gains	1,163.4	47.3	8.9	890.4	1,157.9	748.5	13.8	17.8	31	6.9	0.8	-	-

Supplementary material C. Land Use and Land Cover Transition Matrix in the PEMD External Zone (1985–2006).

(In hectares)	2006													
1985	**Natural Habitat**	**Forest Plantation**	**Pasture**	**Temporary Crops**	**Sugarcane**	**Mosaic of Uses**	**Non Vegetated Area**	**Urban Area**	**Water**	**Perennial Crops**	**Soybean**	**Coffee**	**Total 1985**	**Losses**
Natural Habitat	1,972.9	0.0	286.4	67.2	16.6	136.9	0.0	0.0	2,681.3	0.0	66.1	5.5	5,232.8	3,260.0
Forest Plantation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.3

Pasture	165.8	2.7	1,1817.5	439.3	486.8	2,328.6	3.0	20.1	212.2	243.4	460.7	13.3	1,6193.3	4,375.8
Temporary Crops	0.1	0.0	164.0	32.9	16.1	28.9	0.0	0.0	12.0	0.0	37.3	0.0	291.4	258.5
Sugarcane	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
Mosaic of Uses	99.8	0.0	1,481.7	80.1	151.2	364.6	3.2	21.8	563.6	0.5	163.0	2.8	2,932.3	2,567.8
Non Vegetated Area	0.5	0.0	7.4	0.0	0.0	6.5	0.3	0.5	3.3	0.0	0.0	0.0	18.6	18.2
Urban Area	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.9	0.0	0.0	0.0	0.0	56.9	0.0
Water	15.9	0.0	2.6	0.0	0.0	6.6	0.0	0.0	1,800.6	0.0	0.0	0.0	1,825.7	25.1
Perennial Crops	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.6	0.6
Soybean	0.0	0.0	33.9	10.6	10.2	1.1	0.0	0.0	1.0	0.0	1.1	0.0	58.1	56.9
Coffee	10.2	0.0	55.7	0.0	0.0	4.6	0.0	0.2	0.0	0.0	0.0	12.2	82.8	70.7
Total 2006	2,265.1	2.7	1,3851.2	630.1	680.9	2,877.7	6.6	99.5	5,274.4	243.9	728.8	33.7	-	-
Gains	292.3	2.7	2,033.7	597.2	680.9	2,513.2	6.2	42.5	3,473.8	243.9	727.6	21.5	-	-

Supplementary material D. Land Use and Land Cover Transition Matrix in the PEPF External Zone (1985–2006).

(In hectares)	**2006**													
1985	**Natural Habitat**	**Forest Plantation**	**Pasture**	**Temporary Crops**	**Sugarcane**	**Mosaic of Uses**	**Non Vegetated Area**	**Urban Area**	**Water**	**Perennial Crops**	**Soybean**	**Coffee**	**Citrus**	**Total 1985**	**Losses**
Natural Habitat	383.6	0.1	0.2	4.9	90.1	107.3	0.0	1.8	0.4	0.0	4.9	0.0	2.5	595.5	212.0
Forest Plantation	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3
Pasture	14.8	0.0	164.0	6.6	142.1	404.7	0.0	105.7	0.1	0.4	26.4	0.0	15.6	880.4	716.3
Temporary Crops	0.3	0.0	0.0	9.7	29.3	5.8	0.0	0.0	0.0	0.0	2.2	0.0	0.3	47.4	37.8
Sugarcane	12.1	0.0	1.0	20.8	369.6	102.8	0.0	1.4	0.8	0.0	30.2	0.5	36.3	575.5	205.9

Mosaic of Uses	208.2	0.0	41.9	113.5	874.1	1,763.7	0.0	114.4	26.4	12.6	254.1	0.0	212.4	3,621.2	1,857.5
Non Vegetated Area	6.1	0.0	0.7	14.7	6.8	31.3	1.2	9.0	1.1	0.1	20.3	0.0	3.3	94.4	93.2
Urban Area	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.1	0.0	0.0	0.0	0.0	0.0	40.1	0.0
Water	3.2	0.0	0.2	0.0	0.0	6.7	0.0	0.7	30.8	0.0	0.0	0.0	0.0	41.6	10.7
Perennial Crops	0.0	0.0	0.0	1.8	0.0	24.7	0.0	0.0	0.0	0.0	1.5	0.0	0.0	28.0	28.0
Soybean	0.0	0.0	0.0	1.4	9.8	3.8	0.0	5.6	0.0	0.0	7.7	0.0	0.0	28.4	20.6
Citrus	0.0	0.0	0.0	0.0	0.6	13.7	0.0	0.0	0.0	0.0	13.3	0.0	1.0	28.6	27.6
Total 2006	628.1	0.1	207.9	173.4	1,522.3	2,466.7	1.2	278.6	59.5	13.1	360.5	0.5	271.4	-	-
Gains	244.6	0.1	43.9	163.8	1,152.7	703.0	0.0	238.5	28.6	13.1	352.8	0.5	270.4	-	-

Supplementary material E. Land Use and Land Cover Transition Matrix in the PEPF External Zone (2006–2022).

(In hectares)	**2022**													
2006	**Natural Habitat**	**Forest Plantation**	**Pasture**	**Temporary Crops**	**Sugarcane**	**Mosaic of Uses**	**Non Vegetated Area**	**Urban Area**	**Water**	**Perennial Crops**	**Soybean**	**Citrus**	**Total 2006**	**Losses**
Natural Habitat	463.9	0.0	0.8	0.6	44.5	53.2	0.0	19.9	0.9	0.0	44.5	0.0	628.1	164.3
Forest Plantation	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Pasture	0.7	2.6	124.6	0.0	37.9	40.1	0.9	0.7	0.0	0.0	0.6	0.0	207.9	83.4
Temporary Crops	0.0	0.0	0.0	3.1	42.6	0.1	0.0	0.2	0.0	0.0	127.5	0.0	173.4	170.3
Sugarcane	1.9	0.0	5.0	3.3	1,330.9	103.6	0.0	0.2	0.0	0.0	77.4	0.0	1,522.3	191.3
Mosaic of Uses	114.4	5.1	62.0	15.1	1,015.1	894.6	6.2	137.4	2.2	0.5	214.0	0.0	2,466.7	1,572.1
Non Vegetated Area	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2	0.0

Urban Area	0.0	0.0	0.0	0.0	0.0	0.0	0.0	278.6	0.0	0.0	0.0	0.0	278.6	0.0
Water	3.6	0.0	0.0	0.0	0.0	5.1	0.4	0.0	50.4	0.0	0.0	0.0	59.5	9.1
Perennial Crops	0.0	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	13.1
Soybean	2.2	0.0	0.0	1.2	263.2	6.2	0.1	0.0	0.0	0.0	87.6	0.0	360.5	273.0
Coffee	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
Citrus	0.0	0.0	0.0	0.0	255.7	5.9	0.0	2.4	0.0	0.0	5.8	1.7	271.4	269.7
Total 2022	586.8	7.6	192.4	23.3	3,003.5	1,108.7	8.8	439.3	53.5	0.5	557.3	1.7	-	-
Gains	122.9	7.6	67.8	20.2	1,672.6	214.1	7.6	160.7	3.1	0.5	469.7	0	-	-

Supplementary material F. Land Use and Land Cover Transition Matrix in the EERP Buffer Zone (1985–2011).

(In hectares)	**2011**										
1985	**Natural Habitat**	**Pasture**	**Temporary Crops**	**Sugarcane**	**Mosaic of Uses**	**Non Vegetated Area**	**Urban Area**	**Water**	**Soybean**	**Total 1985**	**Losses**
Natural Habitat	190.0	1.3	0.0	56.7	58.4	0.0	0.8	0.0	0.0	307.2	117.2
Forest Plantation	1.7	0.0	0.0	1.1	0.9	0.0	0.0	0.0	0.0	3.6	3.6
Pasture	6.2	34.8	0.0	88.4	57.5	0.0	0.0	0.0	0.5	187.4	152.6
Sugarcane	17.1	32.2	4.6	1,273.1	225.6	0.1	14.6	0.1	45.1	1,612.4	339.3
Mosaic of Uses	35.8	43.4	2.1	179.2	296.3	0.7	19.9	0.6	8.4	586.4	290.1
Water	0.5	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	1.3	1.3
Total 2011	251.4	111.7	6.7	1,598.4	639.1	0.8	35.6	0.7	53.9	-	-
Gains	61.4	76.9	6.7	325.3	342.8	0.8	35.6	0.7	53.9	-	-

Supplementary material G. Land Use and Land Cover Transition Matrix in the EERP Buffer Zone (2011–2022).

(In hectares)	**2022**												
2011	**Natural Habitat**	**Pasture**	**Temporary Crops**	**Sugarcane**	**Mosaic of Uses**	**Non Vegetated Area**	**Urban Area**	**Water**	**Perennial Crops**	**Soybean**	**Coffee**	**Total 2011**	**Losses**
Natural Habitat	213.7	0.1	0.0	4.8	32.7	0.0	0.2	0.0	0.0	0.0	0.0	251.4	37.8
Pasture	0.4	35.1	0.1	7.3	68.0	0.0	0.7	0.0	0.0	0.1	0.0	111.7	76.6
Temporary Crops	0.0	0.0	2.3	0.4	0.4	0.0	0.1	0.0	0.0	3.5	0.0	6.7	4.4
Sugarcane	7.1	3.4	47.6	1,288.0	104.0	0.0	66.2	0.0	0.0	82.1	0.0	1,598.4	310.5
Mosaic of Uses	69.1	18.4	6.2	49.4	445.7	3.8	38.0	0.3	1.1	5.6	1.7	639.1	193.5
Non Vegetated Area	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.8	0.4
Urban Area	0.0	0.0	0.0	0.0	0.0	0.0	35.6	0.0	0.0	0.0	0.0	35.6	0.0
Water	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.7	0.1
Soybean	0.0	0.0	17.0	0.1	3.6	0.0	5.7	0.0	0.0	27.5	0.0	53.9	26.4
Total 2022	290.3	56.9	73.2	1,350.0	654.8	4.2	146.5	0.9	1.1	118.9	1.7	-	-
Gains	76.6	21.9	70.9	62.0	209.1	3.8	110.9	0.3	1.1	91.4	1.7	-	-