

Appendix 1 - Survey protocols used during fieldwork in Machadinho d'Oeste and Vale do Anari.

Plot Sample Protocol for Rondônia, Brazilian Amazon

RESEARCH ID: _____ COUNTRY ID: _____ SITE ID: _____
CASE #: _____ PLOT #: _____ MANAGEMENT UNIT ID: _____
TODAY'S DATE (mm/dd/yr): ____/____/____
COLLECTOR'S NAME: _____ & email _____
TS AREA/OWNER NAME: _____

IMAGE PRODUCTS USED:

Image ID/date: ____ TM June 1998 _____ Color Composite Used: R = _5_ G = _4_ B = _3_
(3 letter airport code, TM or MSS, m/d/ y) (MSS or TM bands)

Map only: Y/N _N_ Unsupervised Classification: Y/N _Y_ Unsupervised Class for TS reference: _____
(cluster name related to this T.S.)

DIAGRAMS OF GENERAL OBSERVATIONS: Show location of GPS points and major features.

Aerial View

Profile Diagram (parallel to maximum slope)



(include land marks, north arrow and scale bar)

(overall draw of vegetation, slope, and vertical scale)

GEOGRAPHIC COORDINATES:

UTM Northing (X): _____ [m]; UTM Easting (Y): _____ [m] ; UTM Zone: 20; Datum: SAD 69 (or)

Latitude (N/S) ____ °, ____', ____" Longitude (E/W) ____ °, ____', ____" (or)

Decimal Degrees (N/S) ____ . _____ (E/W) ____ . _____

GPS INFO: FILE NAME: _____ ; PDOP: _____

TOPOGRAPHY: Ridge ____ Slope ____ Flat ____ Steepness of Slope: ____ ° (0-90°)

Azimuth (downhill direction of maximum slope in which water would naturally run) ____ (0-360°)

SOIL:

Local Name: _____ Color: _____

Texture: Silt: ____ Clay: ____ Sand: ____ Gravel: ____ Mix: ____ Observations: _____

Moisture: Dry: ____ Moist: ____ Saturated: ____ Observations: _____

LAND COVER TYPE (put a check mark next to land cover type or write in others):

VEGETATION TYPE	DISTURBED:	FARMLAND:
Tropical forest (upland)	SS 3 (advanced succession)	Wood perennial fruit crop
Tropical forest (floodplain)	SS 2 (intermediate succession)	Agroforestry/crops
Tropical forest (open)	SS 1 (initial succession)	Agroforestry/pasture
Gallery forest		
	Disturbed forest (logging)	Plantation (eg. Eucaliptus)
Woodland (Savanna)	Burned field	
Herbaceous/Shrub Savanna	Quarry	Annual:
	Forest with cleared understory	
Grassland (Woody)	(others-use space below):	Pasture
Grassland (Herbaceous)		Pasture-Degraded
Marsh Wetland	INFRASTRUCTURE	Agricultural-Bare soil
Seasonal wetland	Roads	Non-Agricultural- bare soil
Tall Grasses and Shrubs	Dense urban residential	Stubble field
Dry woody shrub	Open urban residential	Plowed field
Mangrove	Commercial	(others-use space below):
Palm forest	Industrial	
Bamboo	Lawn	
	Concrete	WATER
	Blacktop	
	Gravel	OBS:
	Pavement	

VEGETATION STRUCTURE ESTIMATES:

%Herbaceous ____; % litter, ____; % soil ____; % rock ____ (to the nearest 5%)
 Canopy closure: _____% cover Average canopy height: _____m, Height of emergent trees: _____m
 Avg. DBH of trees: 2-10 cm; 10-20 cm; 20-30cm; 30-50 cm; 50-70 cm; 70cm-1m; > 1m____
 Avg. DBH of emergent trees: 10-20 cm; 20-30cm; 30-50 cm; 50-70 cm; 70cm-1m; > 1m____
 Presence of Saplings: Absent____, Few____, Moderate____, Abundant____
 Presence of Seedlings: Absent____, Few____, Moderate____, Abundant____
 Presence of Lianas: Absent____, Few____, Moderate____, Abundant____
 Presence of Epiphytes: Absent____, Few____, Moderate____, Abundant____
 Presence of Palms: Absent____, Few____, Moderate____, Abundant____
 Presence of Succulents: Absent____, Few____, Moderate____, Abundant____
 Presence of Others: _____Absent____, Few____, Moderate____, Abundant____

If secondary vegetation, give original vegetation if known (see land cover table above): _____

PRESENCE OF DOMINANT SPECIES: _____

Trees: _____, _____, _____, _____

Saplings: _____, _____, _____, _____

Seedlings: _____, _____, _____, _____

Herbaceous: _____, _____, _____, _____

PRESENCE OF MANAGED SPECIES (including forest management, plantation, agroforestry):

Number of managed species (including planted): _____;

Sci. Name (Family/Genus/Species): _____

Common Name: _____; Density: Absent____, Few____, Moderate____, Abundant____

Sci. Name (Family/Genus/Species): _____

Common Name: _____; Density: Absent____, Few____, Moderate____, Abundant____

Landscape Change and LULC Dynamics in Rondônia, Brazilian Amazon
Plot Sample Protocol

of Plot Sample: _____ Date: _____
of Sub-Plot: _____ Size of the Sub-Plot: _____

B. Inventory Data Sheet for Trees:

TREE #	DBH (cm)	STEM HEIGHT (m)	TOTAL HEIGHT (m)	OBSERVATIONS ¹
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

¹ For **observation**, note morphological characteristics and/or life form. Ex: tree, liana, palm, succulent, bamboo, others.

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of Plot Sample: _____ Date: _____
of Sub-Plot Sample: _____ Size of the Sub-Plot: _____

C. Inventory Data Sheet for Saplings (1), Seedlings (2), Herbaceous (3), and Lianas (4):

PLANT TYPE (1, 2, 3, 4)	N° OF INDIV.	% COVER	DBH (cm)	TOTAL HEIGHT (m)	OBSERVATIONS ¹

¹ For **observation**, note morphological characteristics and/or life form. Ex: shrub, sapling, woody liana, climber, grass, palm, succulent, bamboo, others.

Landscape Change and LULC Dynamics in Rondônia, Brazilian Amazon
Plot Protocol

of Plot: _____

Date: _____

A. Plot History:

YEAR	LAND USE/COVER TYPE (#)	TECH. @	INPUTS*	# BURNINGS
1998				
1994				
1990				
1988				
1986				
1984				
1982				
1980				

(#) Land use type: 1-Mature Forest (1.1-Upland; 1.2-Floodplain; 1.3-Open); 2-Savanna (2.1-Woodland; 2.2-Herbaceous/Shrub); 3-Grassland (3.1-Woody; 3.2-Herbaceous/Shrub); 4-Secondary Succession (4.1-Advanced; 4.2-Intermediate; 4.3-Initial); 5-Agricultural Land (5.1-Perennial; 5.2-Agroforestry; 5.3-Annual; 5.4-Pasture); 6-Barren Land (6.1-Agricultural Exposed Soil; 6.2-Non-Agricultural Exposed Soil); 7-Built-up Land (7.1-Road; 7.2-Urban Area); 8-Water.

@ Technology: Manual-MAN or Mechanized-MEC.

* Inputs: Fertilizer-FER; Lime (calcareo)-LIME; Ash-ASH