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The following pages contain maps of the Marajoara field site displaying site infrastructure, species distributions, topographical features, satellite imagery, and other important layers. All maps were exported as GeoPDFs and have extended geographical capabilities.

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GEOPDF FEATURES

About Geospatial PDFs

A geospatial portable document file, or GeoPDF, contains geographic information, which can be used to do any of the following:

- Find and mark location coordinates
- Measure distance, perimeter, and area
- Change the coordinate system and measurement units
- Register raster images to create geospatially aware PDFs
- Copy location coordinates into several web-mapping services

Any PDF viewer will open these GeoPDFs but Adobe Reader, a freely downloadable software, is required to access the geospatial capabilities of the GeoPDF maps.


Download Adobe Reader

The latest version of Adobe Reader can be downloaded here: <http://get.adobe.com/reader>.



The website will automatically review your system to find the most appropriate version of the software but other versions can be downloaded here: <http://get.adobe.com/reader/otherversions/>.

Show/Hide Layers

Features in the followings maps are grouped into several layers (i.e. roads, streams, houses, mahogany, etc.) and these layers can be displayed (turned on/off) based on user preference.

The *Layers Panel*, on the left hand side of the screen, can be used to examine layers and show/hide the content associated with each layer. Select  to open the *Layers Panel*.

Many layers are nested into groups while others stand-alone; grouped layers can be turned on/off by turning on/off the parent layer. Layer viewing is discussed below:

1. Choose *View > Navigation Panels*  *> Layers* .
2. To hide a layer, click the eye icon. To show a hidden layer, click the empty box. (A layer is visible when the eye icon is present, and hidden when the eye icon is absent.)

Note: In a nested layer group, if the parent layer is hidden, the nested layers are automatically hidden as well. If the parent layer is visible, nested layers can be made visible or hidden.

3. From the *Options Menu* , choose one of the following:



List Layers For All Pages..... Shows every layer across every page of the document.

List Layers For Visible Pages..... Shows layers only on the currently visible pages.






Reset To Initial Visibility..... Resets layers to their default state.

View/Find Geospatial Coordinates

The *Geospatial Location Tool* can be used to see longitude/latitude values and find/mark locations on maps.




1. Choose *Tools > Analysis > Geospatial Location Tool* .
2. Move the cursor over the map to view latitude/longitude in the lower-right corner.
3. To find a location, right-click inside the map, and then click *Find a Location* .
4. Type the latitude and longitude values (degrees, minutes, seconds, or decimal) into the two text boxes, and click *Find*.

If a location is found least one location is available, the location is highlighted with a blue square and the page is centered on the highlighted location. Because this document contain several maps, all with similar spatial coverage, a location will often be found in several places.

5. If *Find* identifies the location in several places, click the *Next*  or *Previous*  button to view the additional locations.
6. (Optional) To add a comment (i.e., a place name or note), click *Mark Location*  or *Add Sticky Note* , and then add the information in the comment box.
7. To end the search, right-click inside the map and select *Hide Location Search*  to remove the search boxes.



Mark Geospatial Locations

The *Geospatial Location Tool* can also be used to mark and/or label a place on the map.

1. Choose *Tools > Analysis > Geospatial Location Tool* .
2. Move the cursor over the map to view latitude/longitude in the lower-right corner. Right-click inside the map and select one of the following:
 - *Find a Location*: finds areas within the document with the specified coordinates.
 - *Mark Location*: marks the area currently selected with the location marker symbol .
3. (Optional) To add a comment (i.e., a place name or note), click the location marker , and then add the information in the comment box.

Copy Location Coordinates


After you find a location in the map, you can copy and paste the coordinates into a web mapping service (i.e. Google Maps) that reads latitude and longitude coordinates.

1. Choose *Tools > Analysis > Geospatial Location Tool* , and right-click on the location.
2. Click *Copy Coordinates To Clipboard* .

Adobe Reader copies the data in this format: latitude then longitude, separated by a space. Paste the data into the address bar of a web mapping service that can interpret the location data.


View Feature Attributes

The attribute data of the map features can be viewed using the *Object Data Tool* to select features to review in the *Model Tree* window.

1. Choose *Tools > Analysis > Object Data Tool* .
2. Double-click an object on the page to show its metadata.










This opens the *Model Tree* window that displays a hierarchical list of all the map features. The attribute data of the selected feature is displayed at the bottom of the *Model Tree* window.



The attribute data of other features can be viewed by selecting those features in the *Model Tree* window or by using the *Object Data Tool* to select features on the map.

3. To export object metadata, from the *Options Menu* , choose *Export As XML > Whole Tree* to export all objects in the *Model Tree*, or choose *Export As XML > Current Node* to export only the selected object and its children.

Measure Distance, Perimeter, and Area

The measurement tools can be used to calculate distance, perimeter, and area using a variety of measurement units (km, mi, ft, ha, etc.). The measurement tools are able to snap to features on the map enabling more precise measurement analysis.

1. Choose *Tools > Analysis > Measuring Tool* .
2. In the *Measurement Tool* display, select a measurement type: *Distance* , *Perimeter* , or *Area* .
3. Select a snap-to option:s
 - *Snap to Paths* : snaps measurement to the end of a line
 - *Snap to Endpoints* : snaps measurement to the endpoint of a line
 - *Snap to Midpoints* : snaps measurement to the midpoint of a line
 - *Snap to Intersections* : snaps measurement to the intersection of multiple lines
4. Do one of the following:
 - If you are using the *Distance Tool* , click where you want to begin the measurement and then click where you want to end the measurement. The distance is displayed in the lower-right corner.

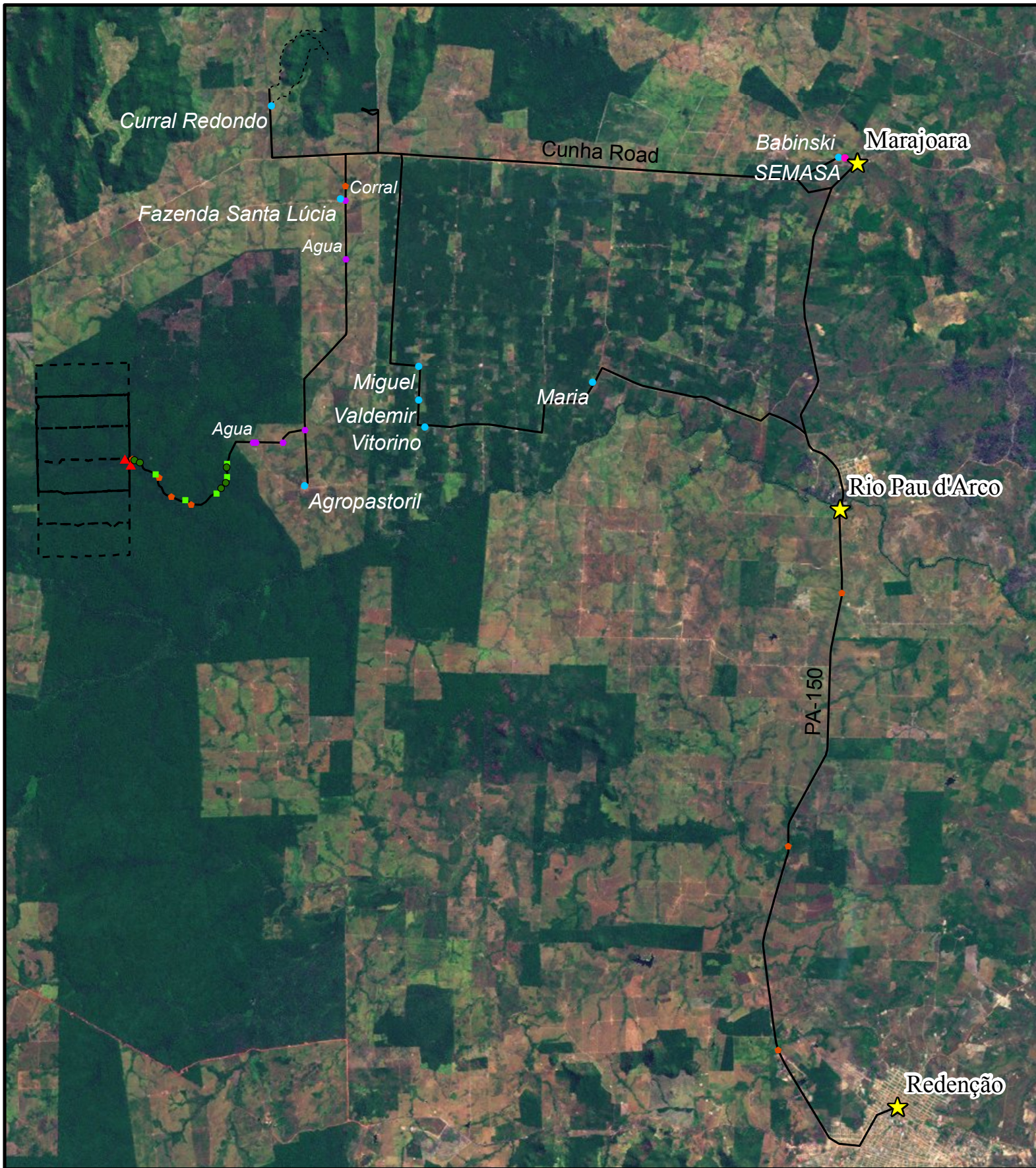
- If you are using the *Perimeter Tool* , click where you want to begin the measurement and then click on the remaining perimeter vertices. Double-click when you reach the end point. The length is displayed in the lower-right corner.
 - If you are using the *Area Tool* , click where you want to begin the measurement and then click on the remaining area vertices. Double-click when you reach the end point. The area is displayed in the lower-right corner.
5. To finish the measurement, right-click and select *Complete Measurement*. Or, to cancel the measurement, right-click and select *Cancel Measurement*.

To change the measuring options, including coordinate system, latitude/longitude display, and measurement units, right-click anywhere while the *Measuring Tool* is selected. Measuring preferences can also be accessed through this window. For more information, refer to the user manual referenced at the end of this guide.

More Information

A more in depth review of the Adobe Reader software can be downloaded here:
http://help.adobe.com/en_US/Acrobat/9.0/Standard/acrobat_standard_9.0_help.pdf.

The “Layers” (Pg. 290-292), “View Object Data” (Pg. 288-289), and “Geospatial PDFs” (Pg. 292-295) sections are in “Chapter 11: Editing PDFs” of the user guide.

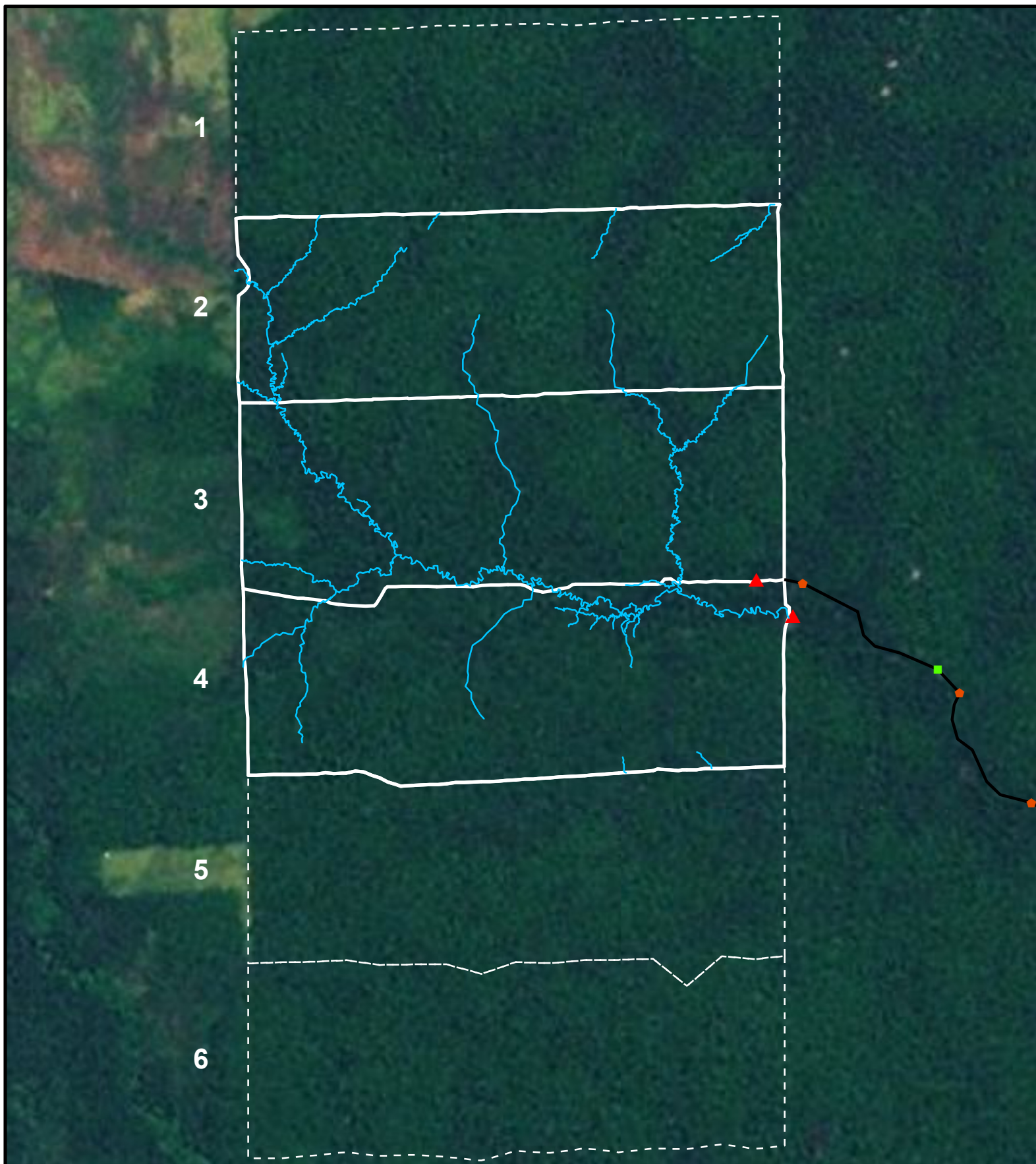


Marajoara - Região

- | | | | |
|----------------|--------------|------------|----------------|
| ★ Cidades | ● Escritório | ● Pontes | --- Picadas |
| ● Mognos | ● Casas | ● Locales | 1035ha parcela |
| ▲ Acampamentos | ■ Esplanadas | — Estradas | 6 Talhões |








0 2.5 5 10 km

Satellite Imagery Source: ESRI World Imagery, June 2010. Projection: WGS 1984, UTM, Zone 22S.

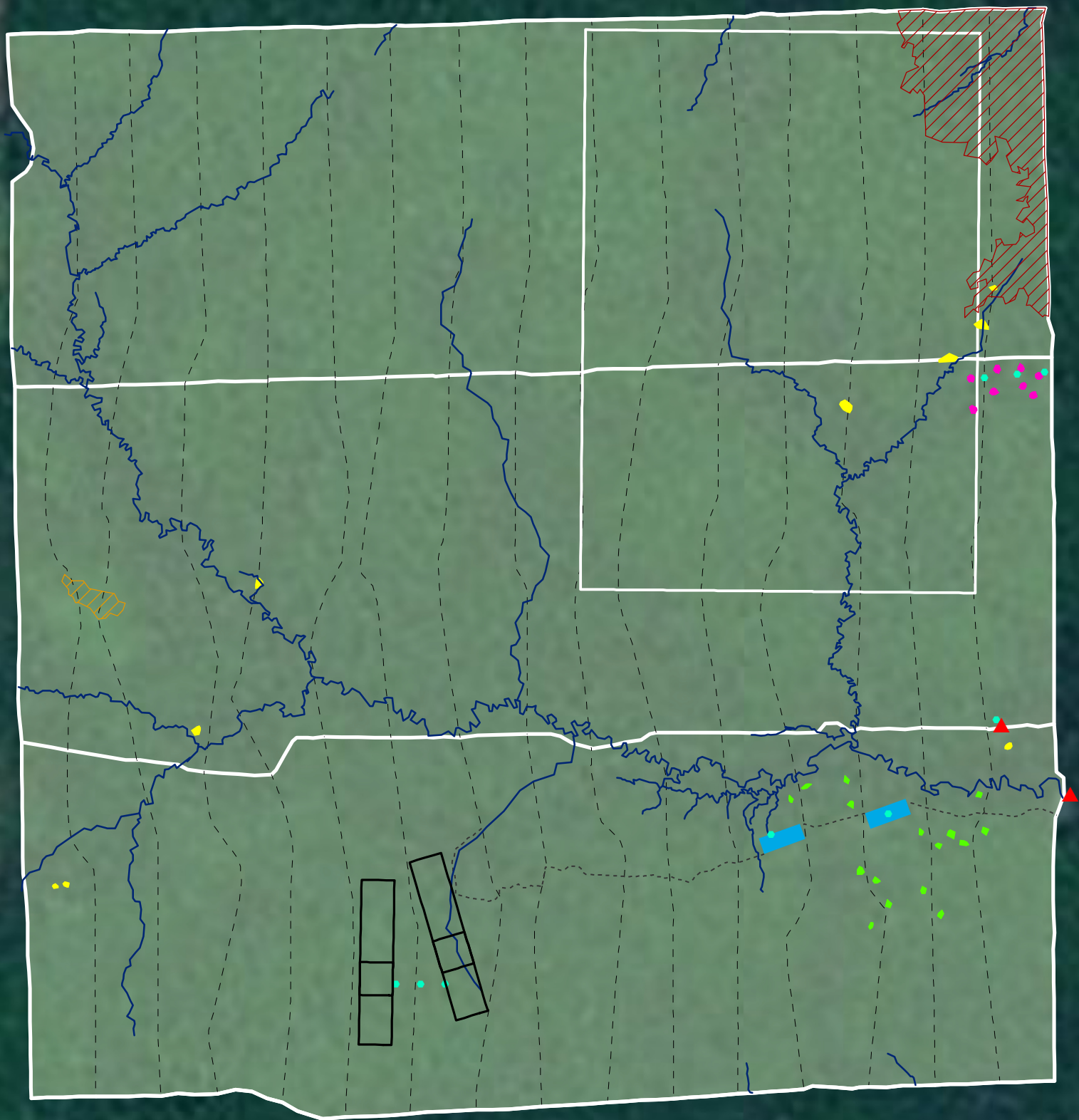


Marajoara - 6 Talhões

0 0.5 1 2 km

- | | | | |
|---|---|--|---|
|  Grotas |  Esplanada |  Estrada |  Talhões |
|  Acampamentos |  Pontes |  1035ha divisas | |

Satellite Imagery Source: ESRI World Imagery, June 2010. Projection: WGS 1984, UTM, Zone 22S.

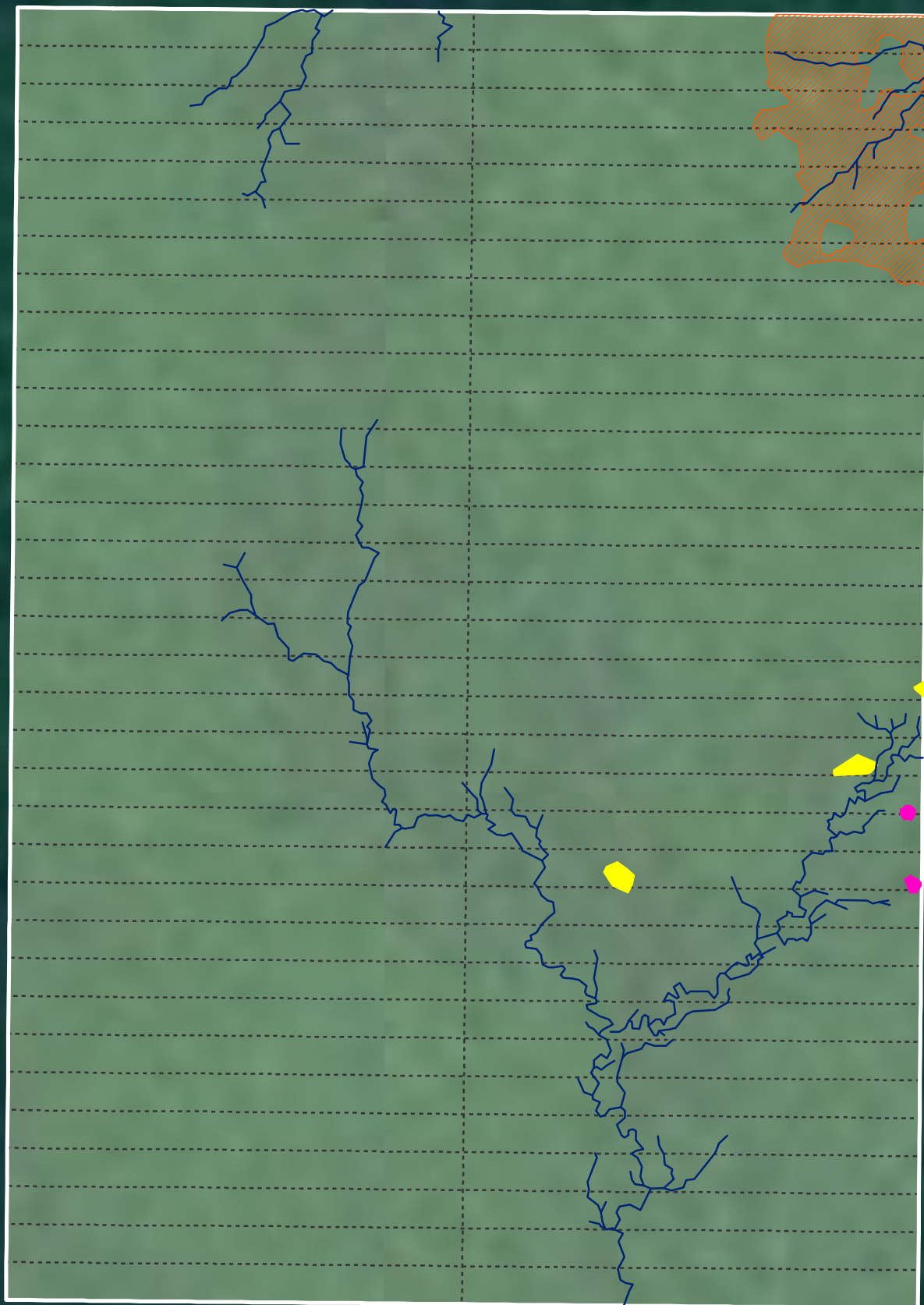


Marajoara - Área do Estúdio

0 0.25 0.5 1 km

- | | | | |
|------------------|----------------------|---------------------|----------------|
| Fogo | Poços | 2 Clareiras | 204ha Parcela |
| Cerradão | Grotas | 2 Clareiras picada | 1035ha Parcela |
| AB parcelas | Bacias hidrográficas | Novas clareiras | Picadas |
| Mogno inventário | 16 Clareiras | Liberação clareiras | Divisas |
| Acampamentos | | | |

Satellite Imagery Source: ESRI World Imagery, June 2010. Projection: WGS 1984, UTM, Zone 22S.

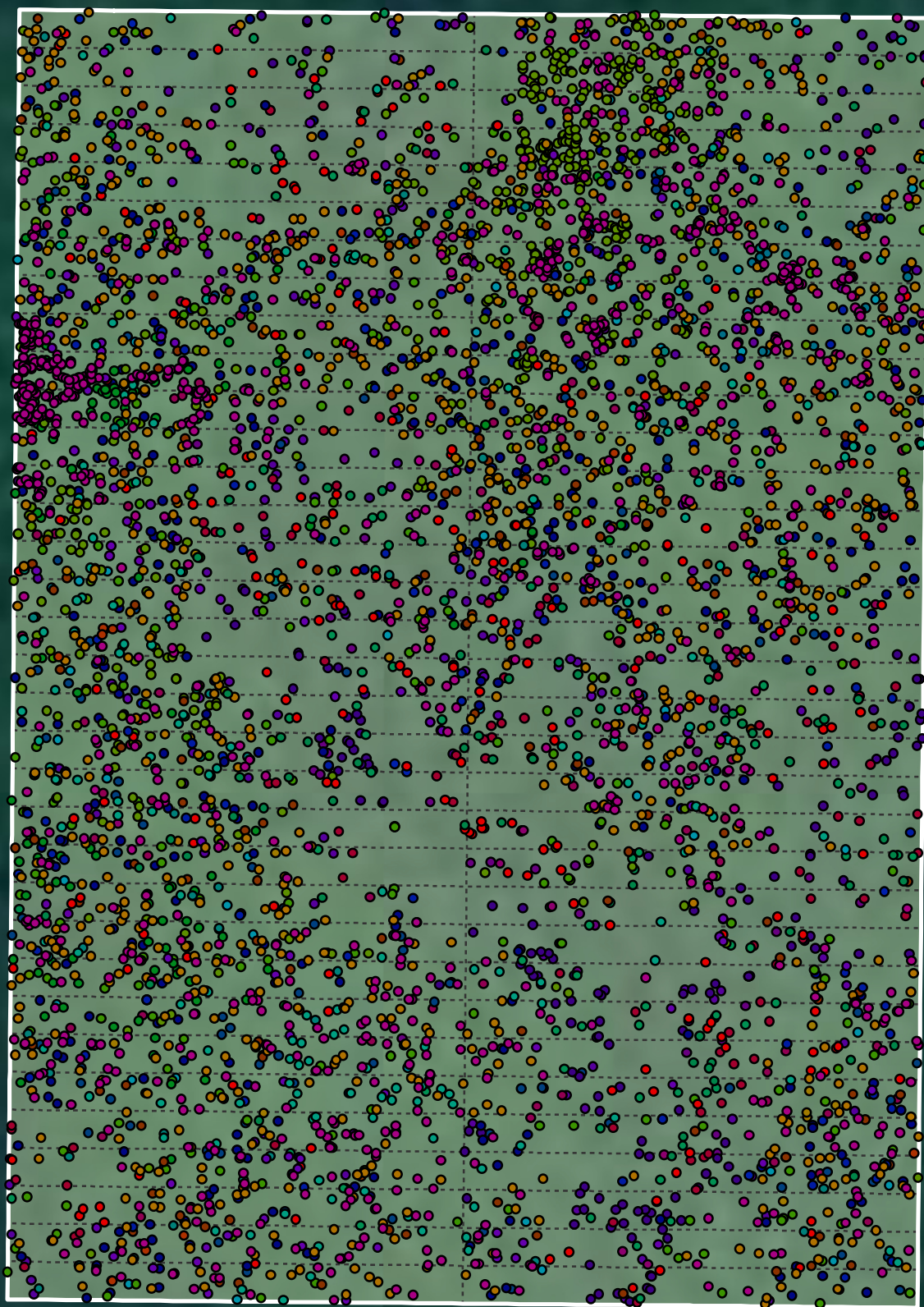


Marajoara - 204ha parcela

0 0.125 0.25 0.5 km

- Poços
- Fogo
- Liberação clareiras
- Picadas
- Grotas
- Novas clareiras
- Parcela

Satellite Imagery Source: ESRI World Imagery, June 2010. Projection: WGS 1984, UTM, Zone 22S.

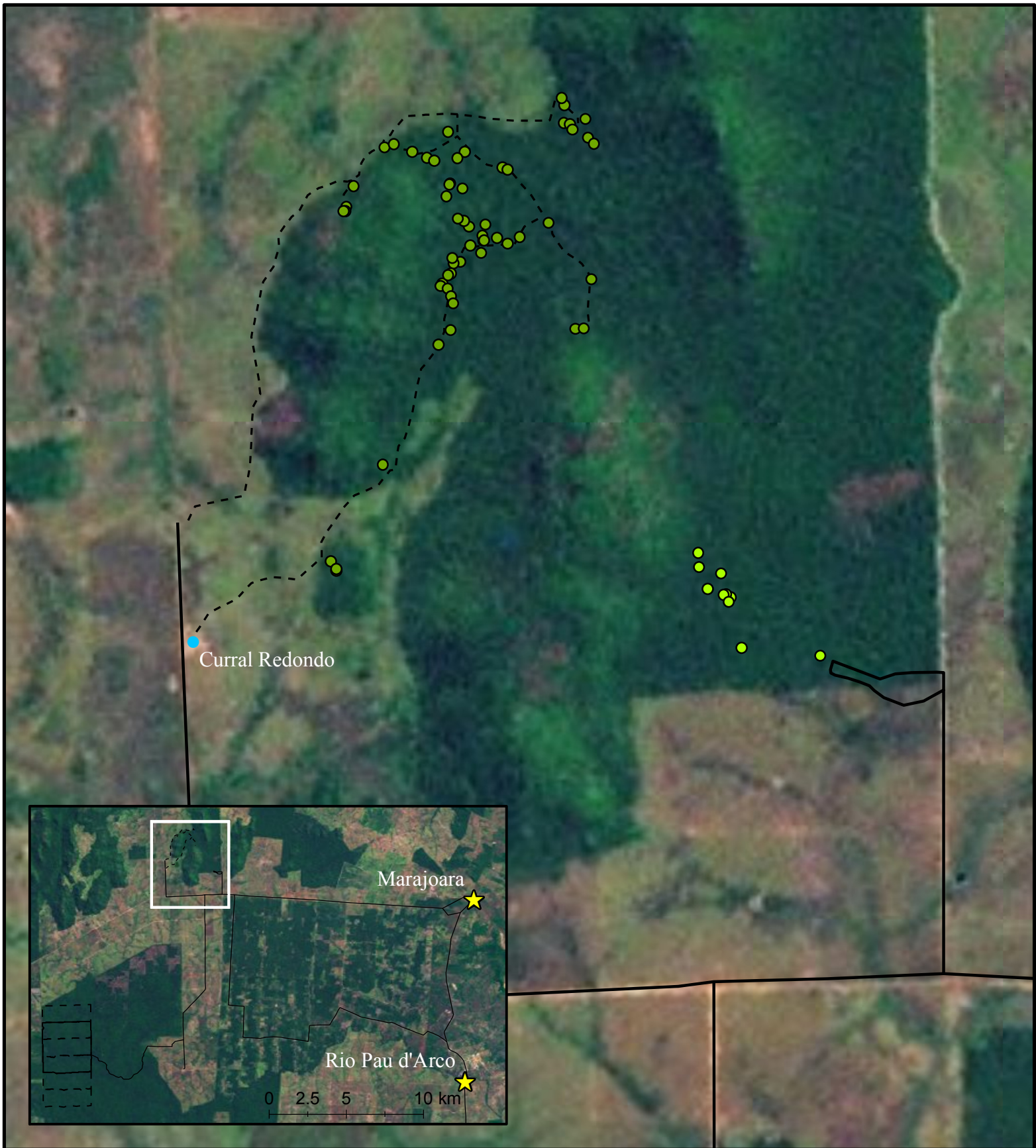


Marajoara - 204ha espécies

0 0.125 0.25 0.5 km

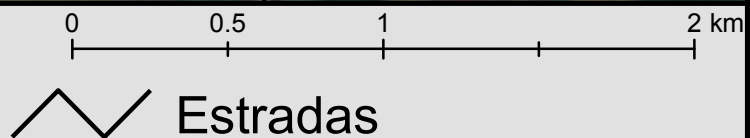
ipê	mangue un	cinzeiro	favão	caximbeira	pau brasil
pará-pará	amarelão	mirindiba	orelho	cedro	pau jacaré
armescaoeira	copaiba	angíco	angelim	maçaranduba	sumauma
mangue enorme	marupá	cedrarana	axixá	morototó	ucuuba
mangue lixa	jatoba	fava	cângirana	paricá	

Satellite Imagery Source: ESRI World Imagery, June 2010. Projection: WGS 1984, UTM, Zone 22S.



Marajoara - Curral Redondo

- FSL mognos
- CR mognos
- Casas
- Picadas



Estradas