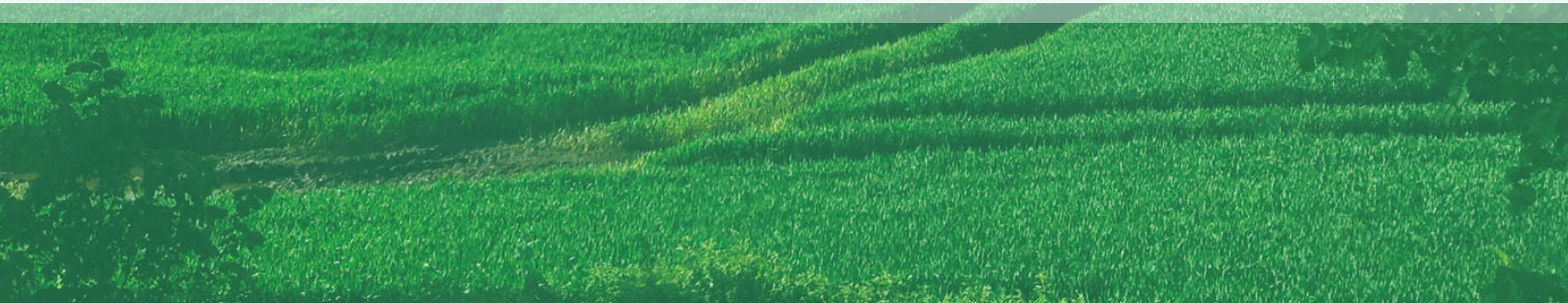




# **Remote sensing, Forest Biometrics and Economics to Understand and Tackle Land Use and Land Cover Change in Brazil (UFLA-VT TECH)**





## 1) Institutions involved:

Located in the south of Minas Gerais state, the **University of Lavras - UFLA** is 230 km away from the state capital city of Belo Horizonte, 380 km from São Paulo and 420 km from Rio de Janeiro









# UFLA – Facts and Figures - 2019

Undergraduate students	12,229
Graduate students	3,183 (2,232 Stricto Sensu and 846 Lato Sensu)
Total	15,412
Undergraduate programs “on campus”	31
LDLS (Undergraduate)	5
LDLS (Lato sensu Programs)	13
Graduate programs	65 (33 Masters 23 PhD and 9 Professional Master)



# UFLA – Facts and Figures - 2019

Faculty members	764
Employees	582
Outsourced employees	531
Daily population on campus	17,184





# University Structure

- Main Campus in Lavras: 600 ha
- New Campus being constructed in São Sebastião do Paraíso
- 3 experimental farms
- 27 Departments
- 216 Labs
- 1 Central Library
- 145 Centre of Studies
- Restaurant
- Museums
- Publishing House
- Radio and TV Station





# lemaf

LABORATÓRIO DE ESTUDOS E PROJETOS EM MANEJO FLORESTAL











## **2) Nature of the collaboration:**

Memorandum of Understanding-MoU

## **3) Type of capacity building:**

Research-based environmental policy advice as to contribute to the refinement of the country's land management tools

## **4) Scope of the capacity building activity:**

Environmental Rural Registry of Private Properties -  
CAR





## What is the **Environmental Rural Registry?**

The **Environmental Rural Registry** is an electronic cadaster, mandatory for every rural property within the Brazilian territory. The goal is to integrate environmental information concerning consolidated rural areas and areas still covered by remnants of native vegetation, as well as to monitor changes within these areas.



# CAR Data Base

## **Declared data:**

- Property boundaries
- Legal Reserves
- Areas of Permanent Preservation
- Springs
- Consolidated rural areas
- Remnants of native vegetation

## **Land cover data:**

Wall-to-wall remote sensing based image classification

## **Policy related data:**

- Areas under judicial limitations
- Indigenous areas
- Conservation Units
- Settlement areas
- Communities and traditional people

## **Remotely sensed data:**

- RapidEye 2011, 2012, 2013, 2014
- Landsat 2008, 2015
- Sentinel 2016, 2017, 2018, ...



# Figures of the Environmental Rural Registry



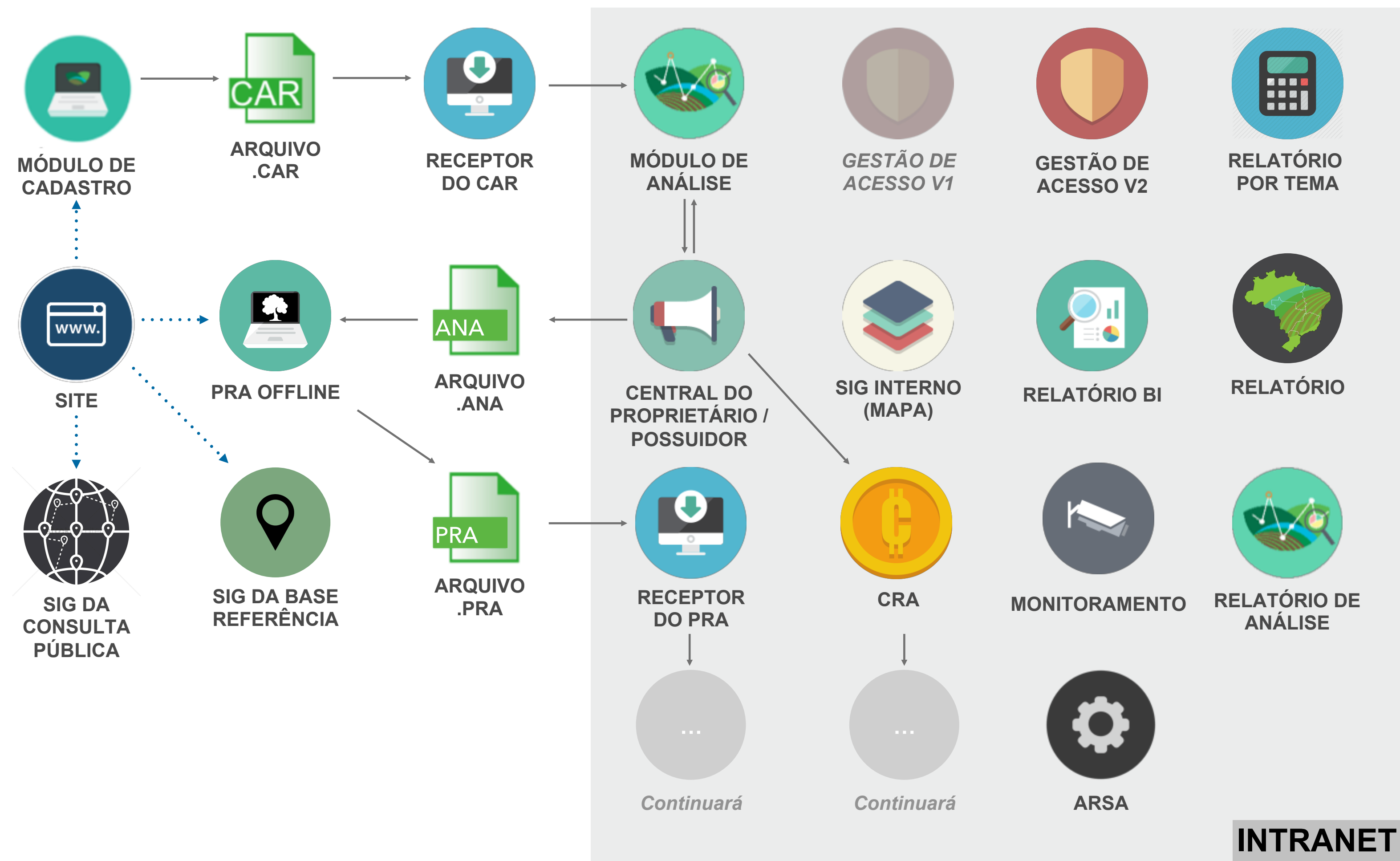
**5.429.211**  
private properties

**534.600.408,15 ha**  
total registered area

As per 05 of December, 2019.  
Source: Public report (<http://www.car.gov.br/publico>)

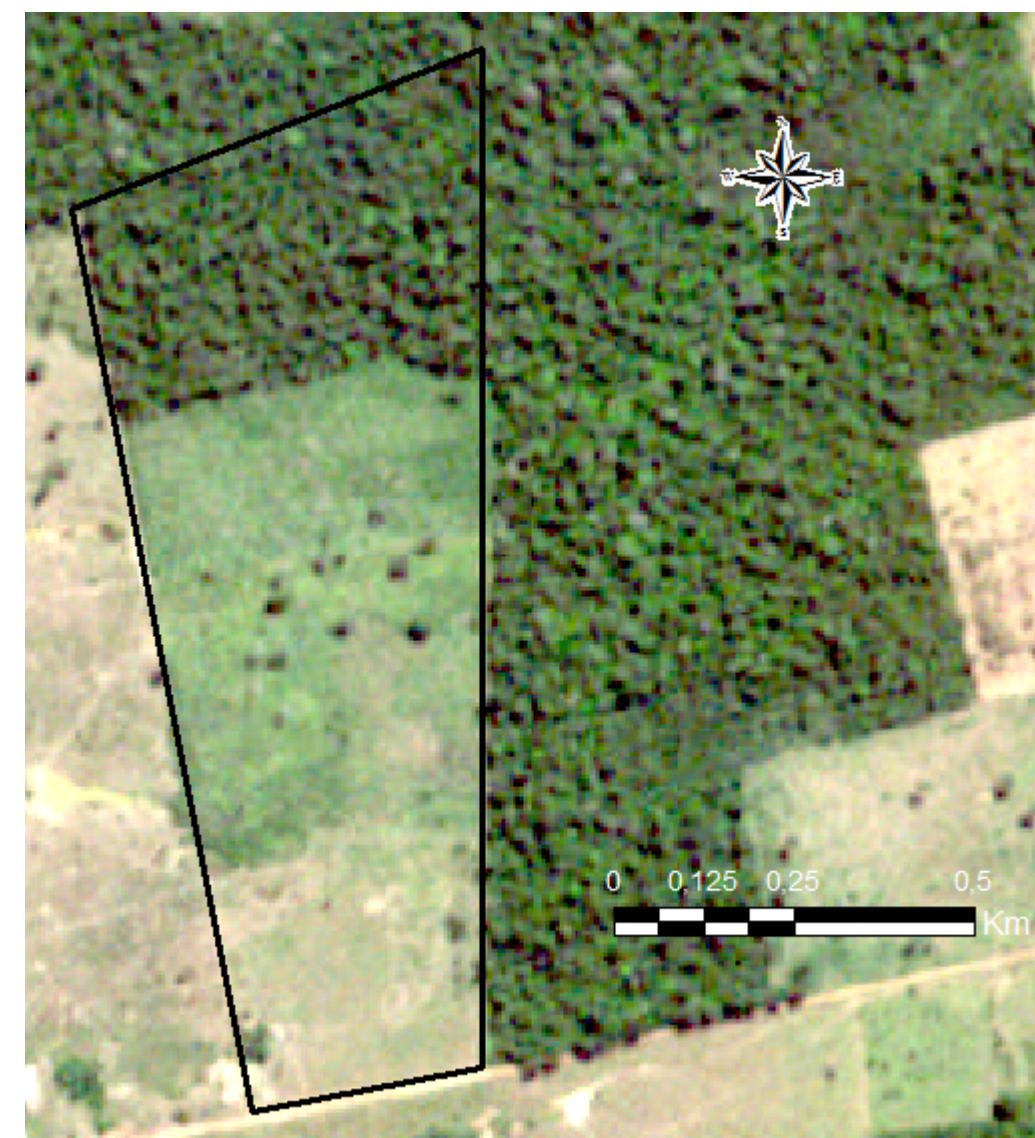


# CAR Modules



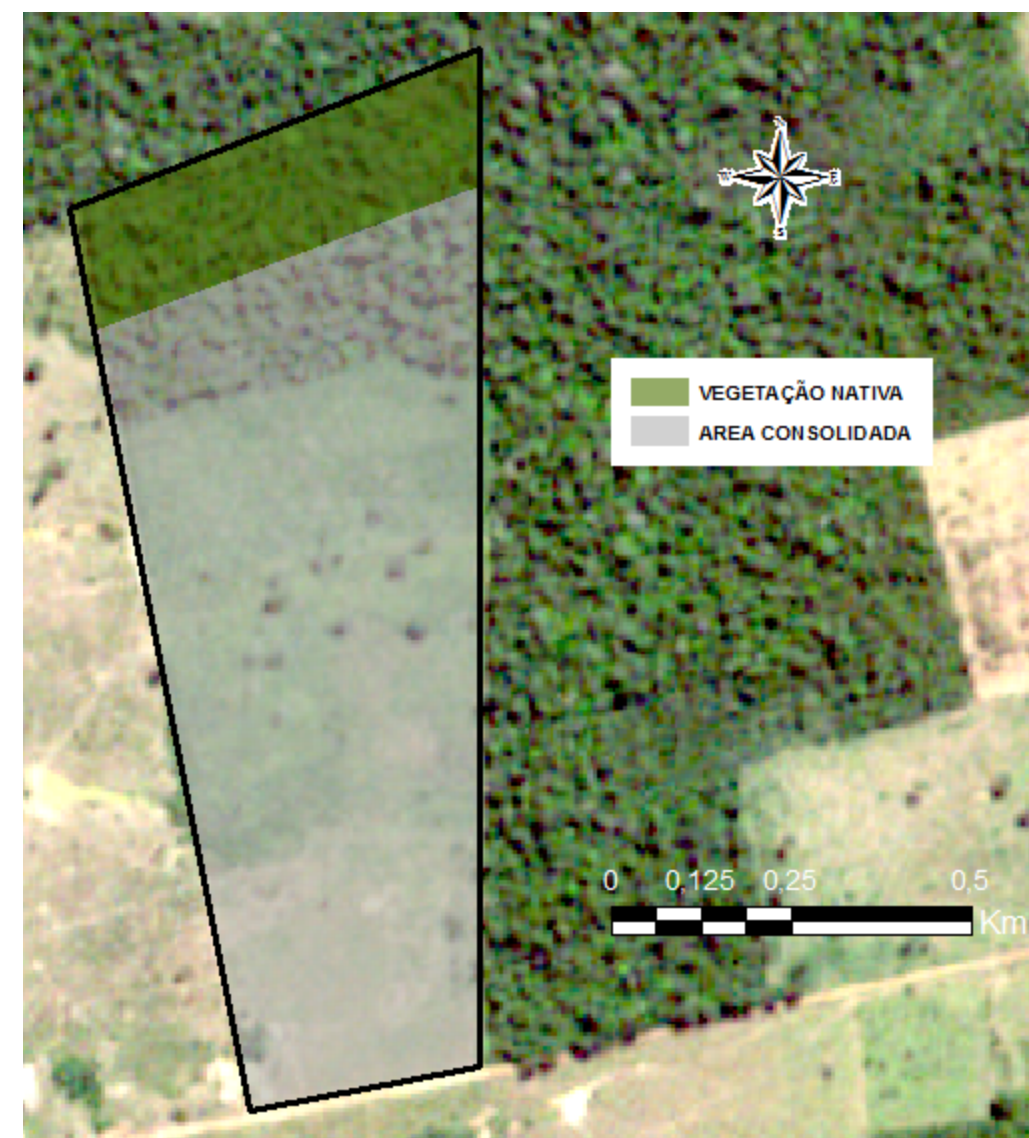


2008

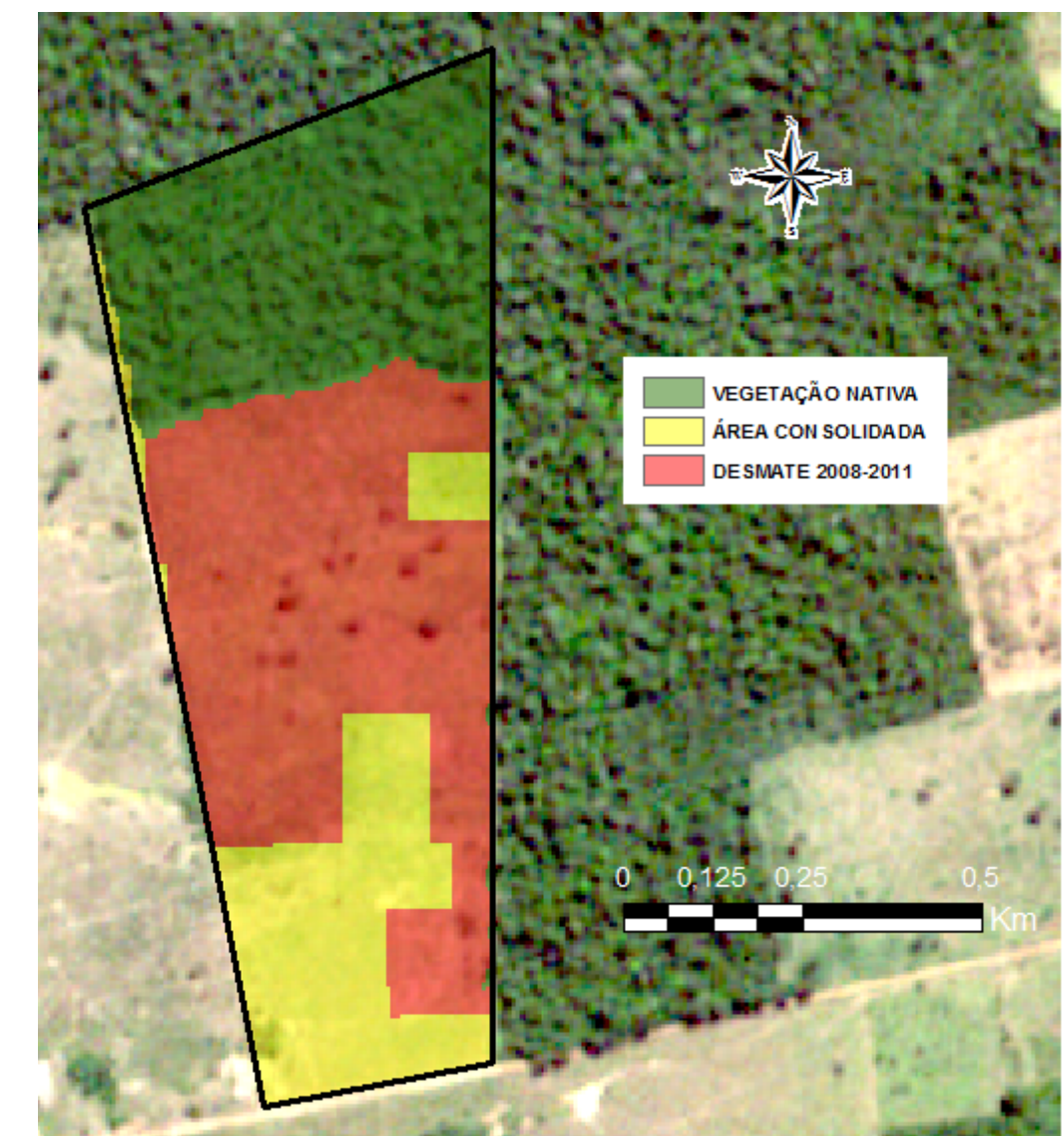


2011

Declared



Mapped





## Declared



## Mapped

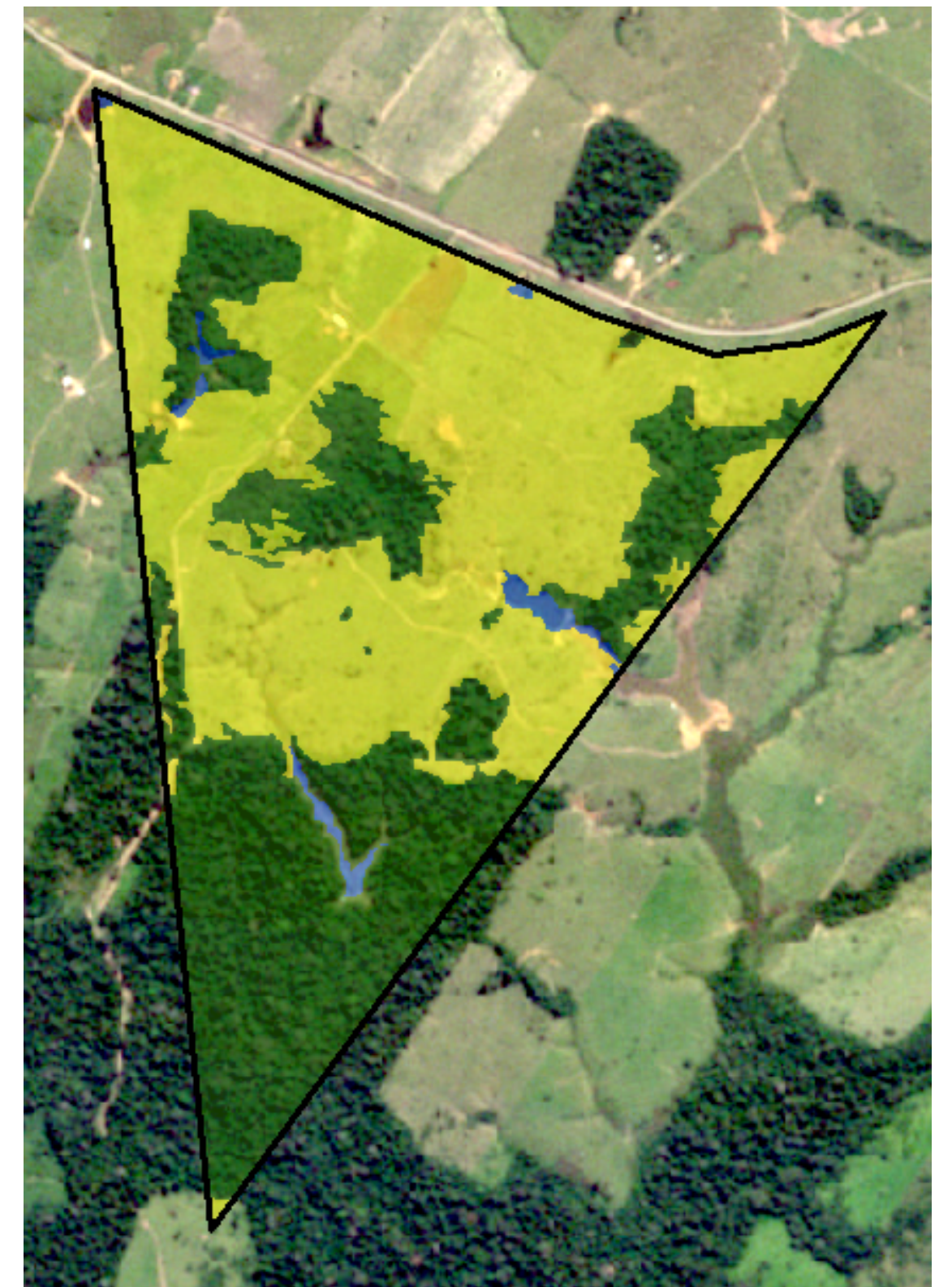




## Declared

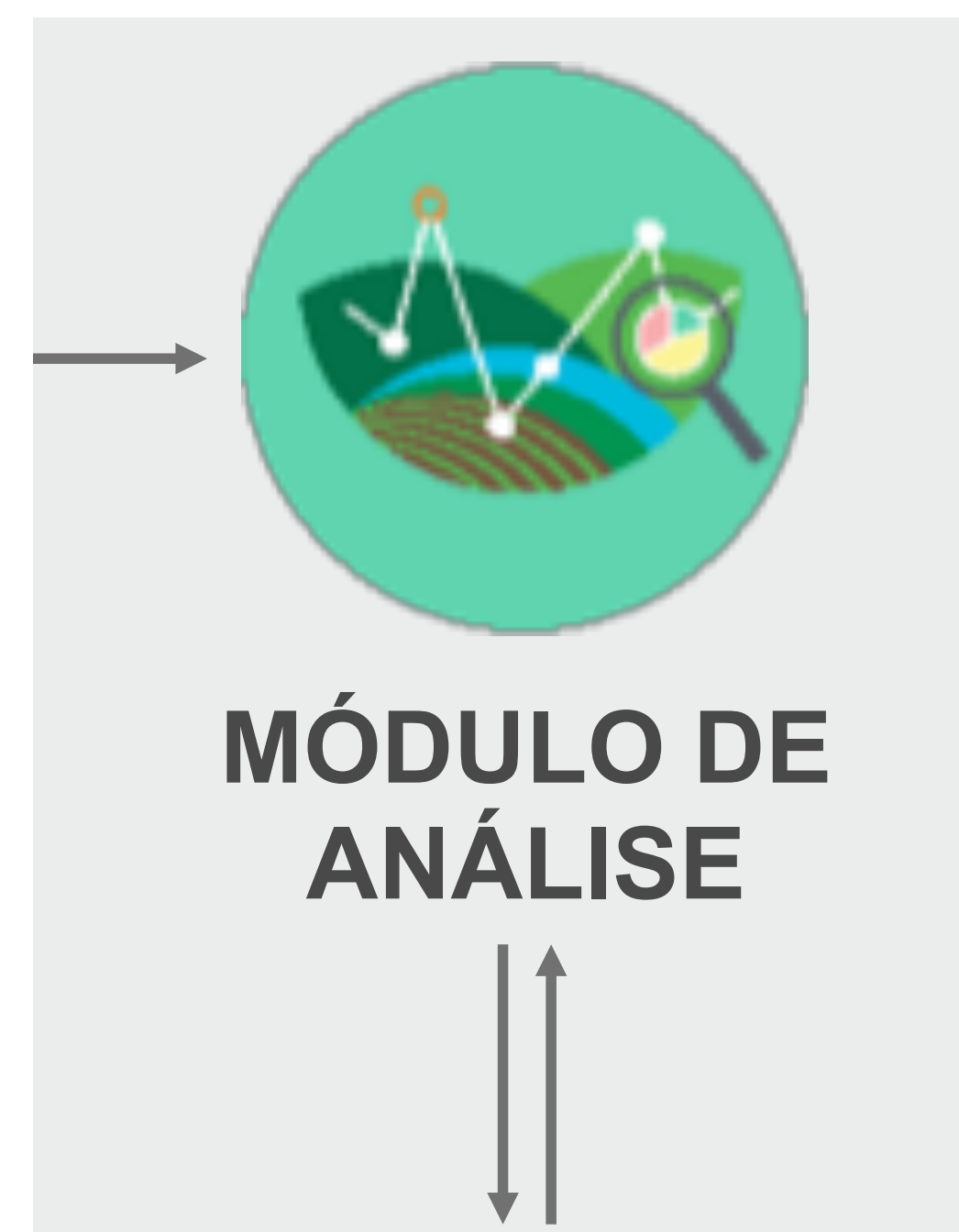


## Mapped





# Capacity Building





## 5) Importance of stakeholder engagement in the process of taking knowledge to action.



### Capacity Building for the Environmental Rural Registry

**41,000** stakeholders trained for the cadaster and analysis modules

- Land owners
- Technicians
- Grad and undergrad students



**Thanks!**

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