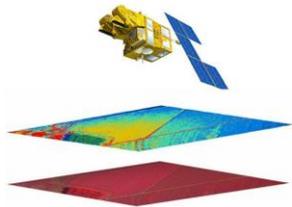
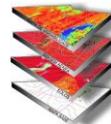


Geospatial Analysis and Modeling



UNICAMP



GEO

Grupo de Estudos em Geoprocessamento

Jansle V. Rocha

Modelling

LACAf 1, 2 ,3...

Pasture Intensification

Geospatial Database

- All projects use georeferenced data
- Need to set a standard for data input/retrieval
- An environment for scenario simulation
- A way to show LACAf's integrated results

GEOSPATIAL DATABASE and MODELING

Different Geographical Data/Units

Social/economical



GAUL/Census/Statistics...images...

Environmental



Images/Maps/Bins...

Modelling



Climate bins (5' x 5')/Maps/Images...

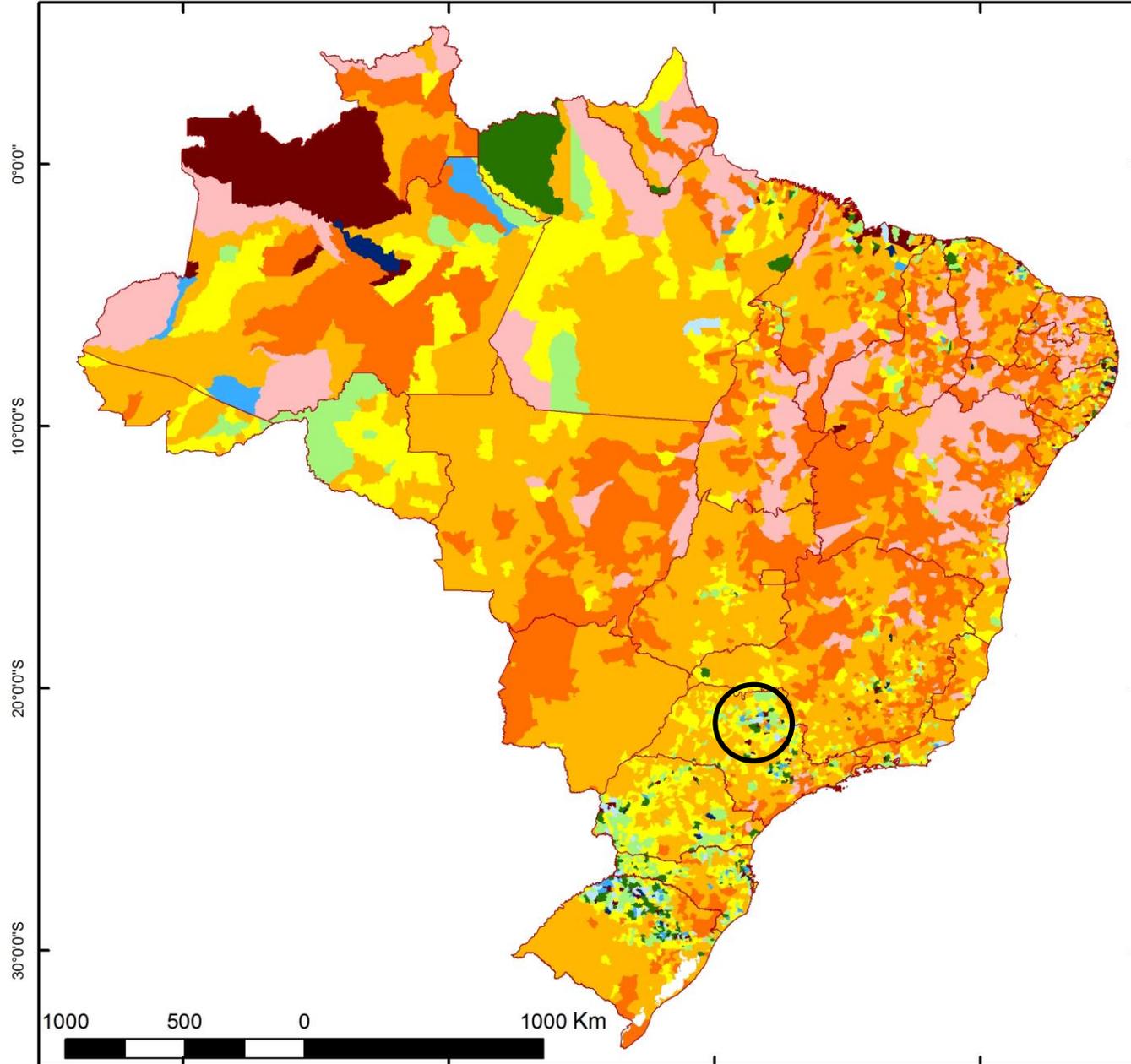
Preliminary analysis – cattle density

70°0'0"W

60°0'0"W

50°0'0"W

40°0'0"W



Livestock in Brasil - Stocking Rate (hd/ha)

Legend

Stocking rate - 2006 hd/ha

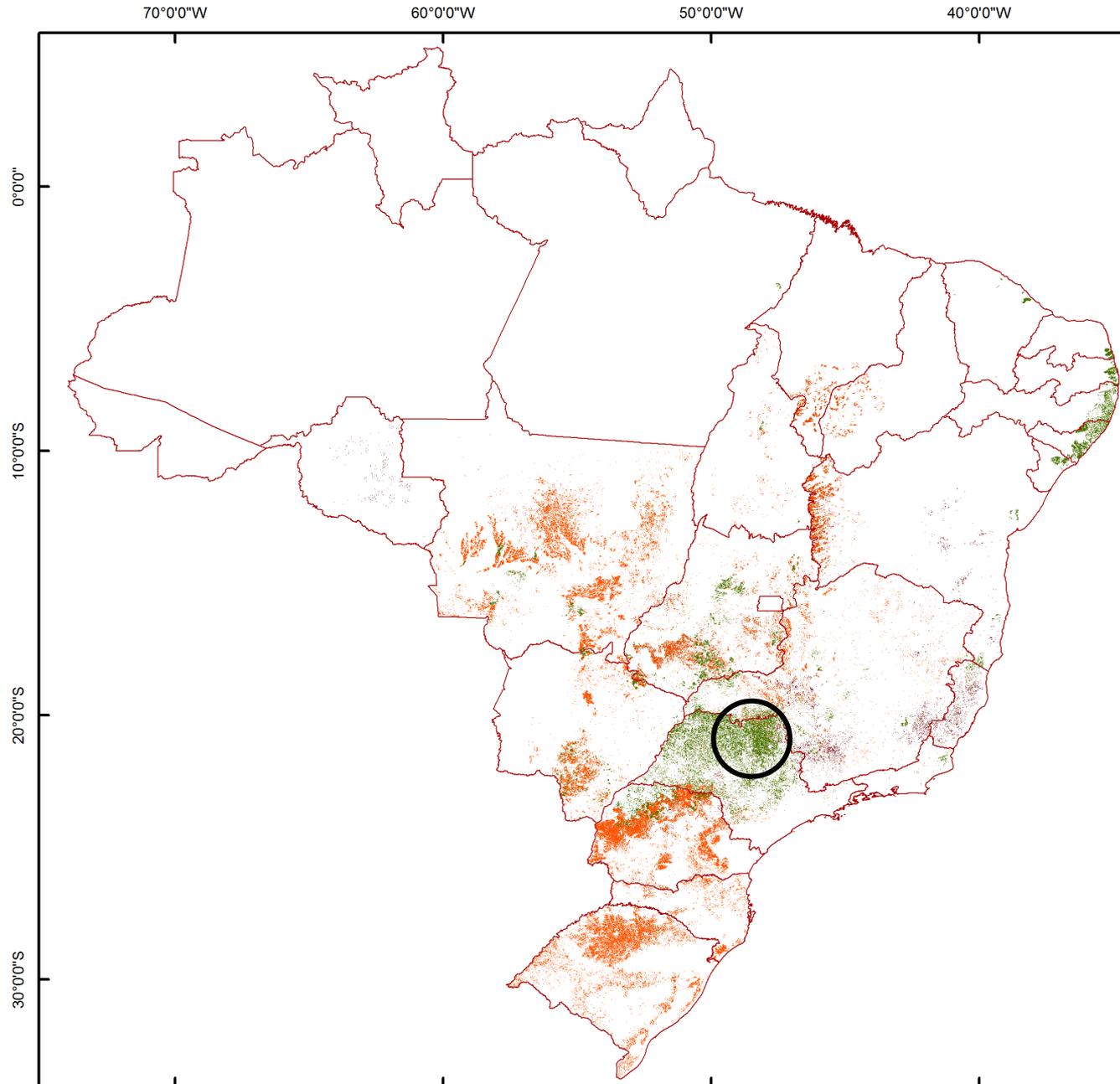


Datum: SAD69

1:23000000

Source: IBGE, census 2006

Preliminary analysis – crop mask



Legenda

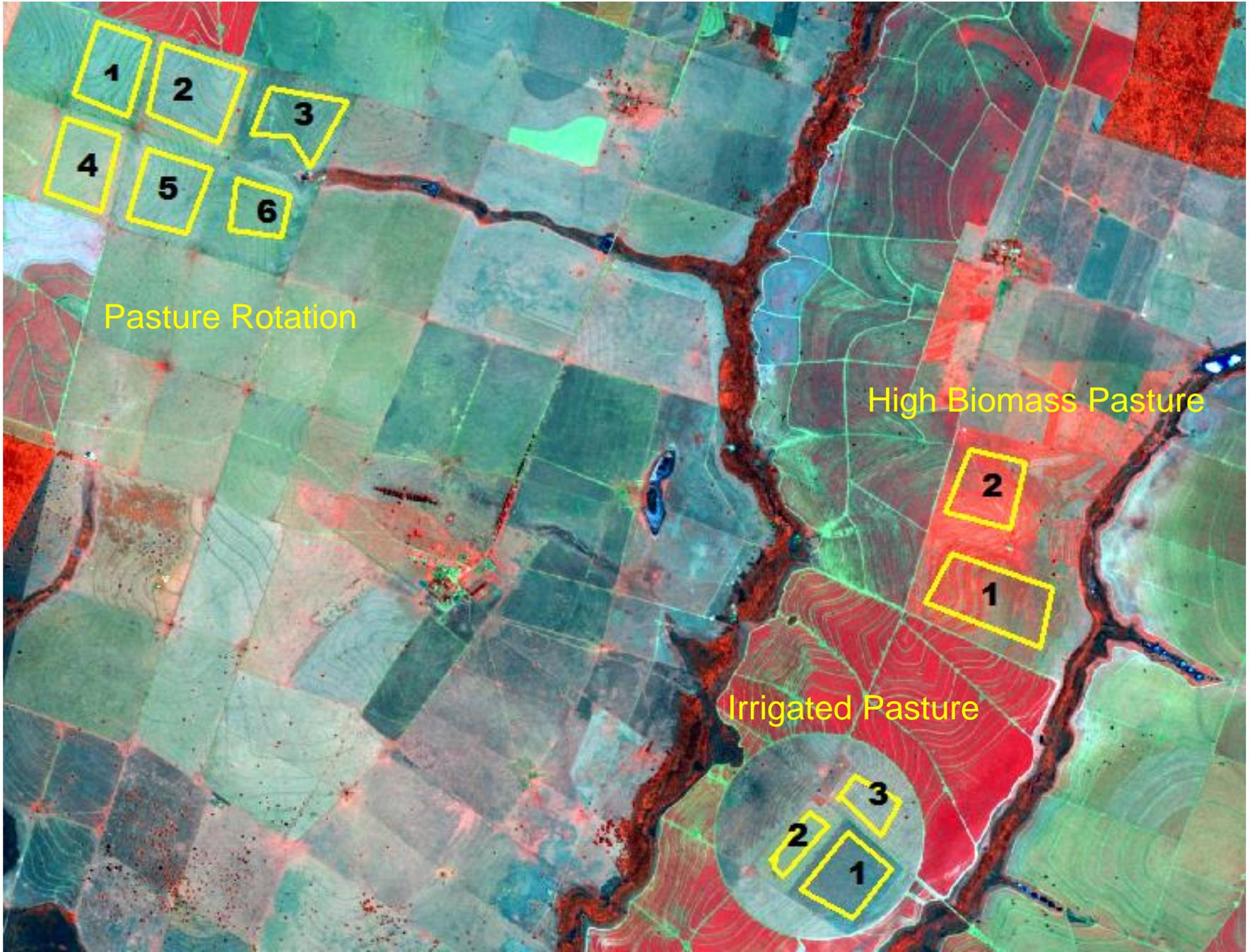
-  Coffee
-  Sugarcane
-  Grains



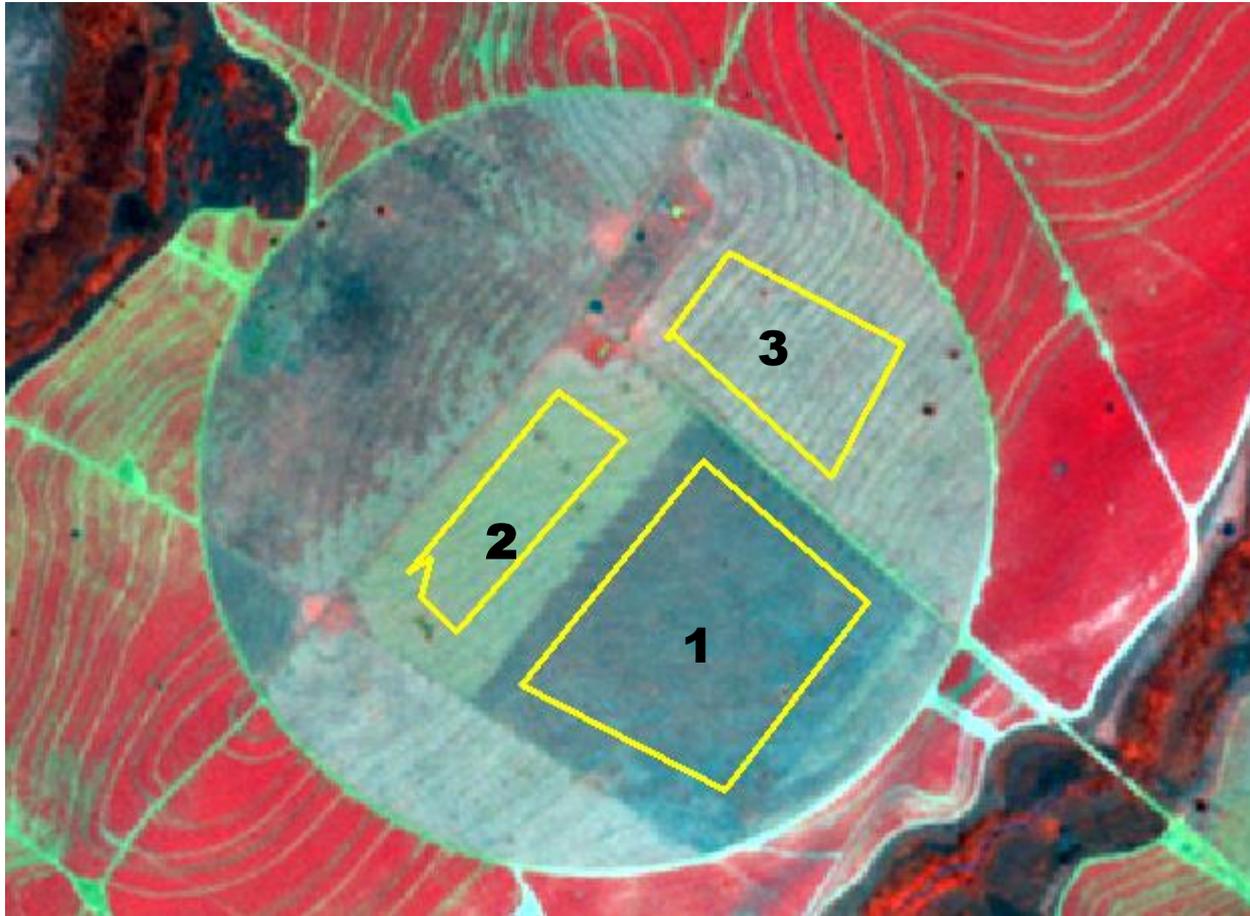
Datum: SAD69

Fontes: IBGE, censo 2006 e
CanaSat 2008 (DVD Conab)

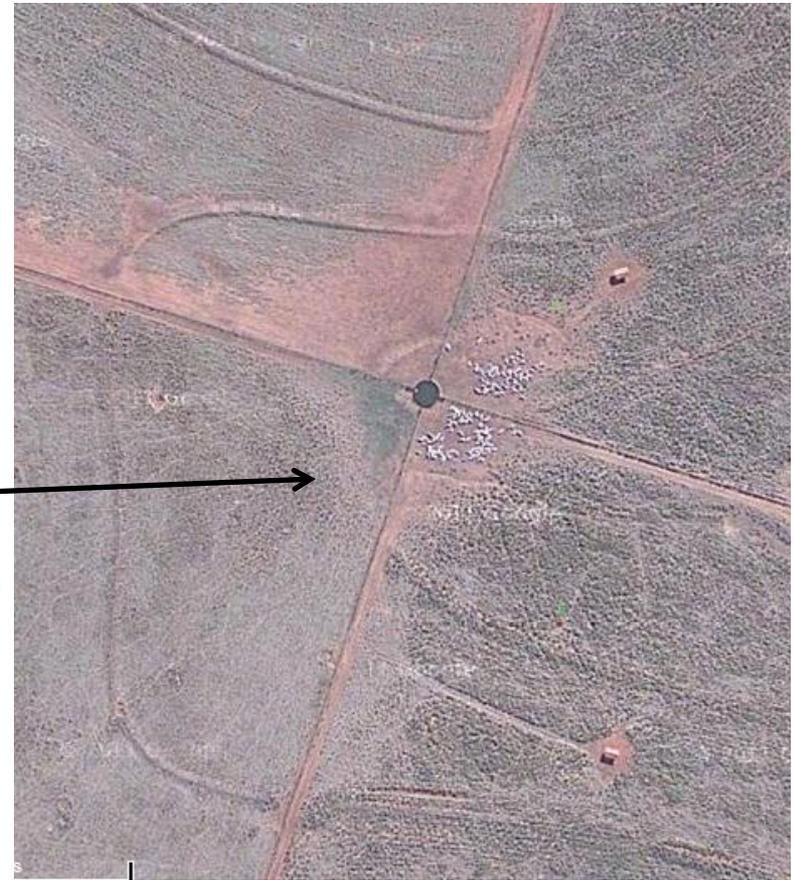
Preliminary analysis – pasture intensification

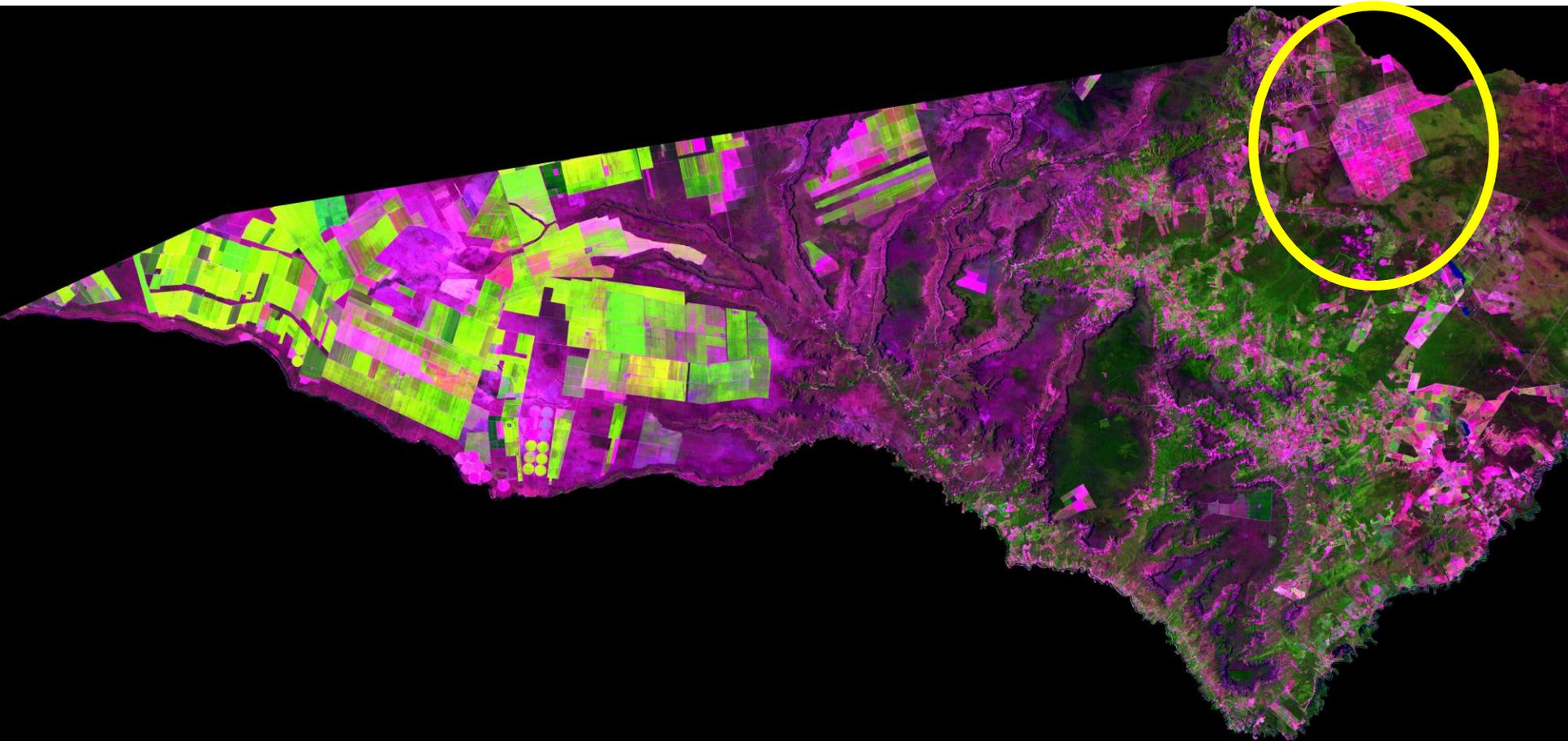


Irrigated Pasture

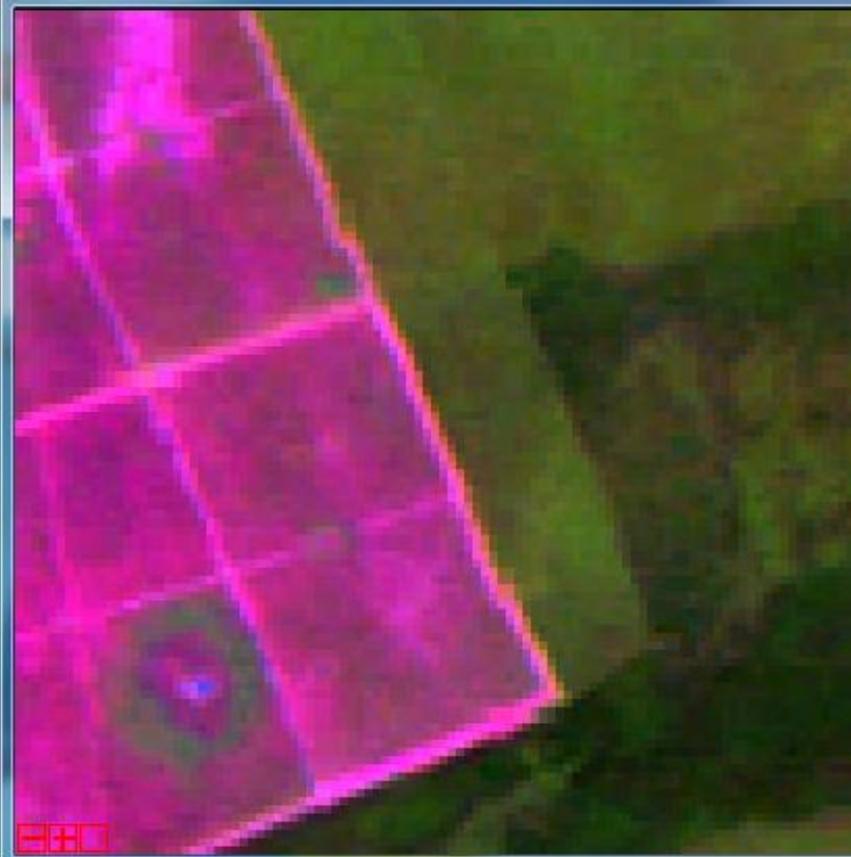


Pasture Rotation





e Overlay Enhance Tools Window



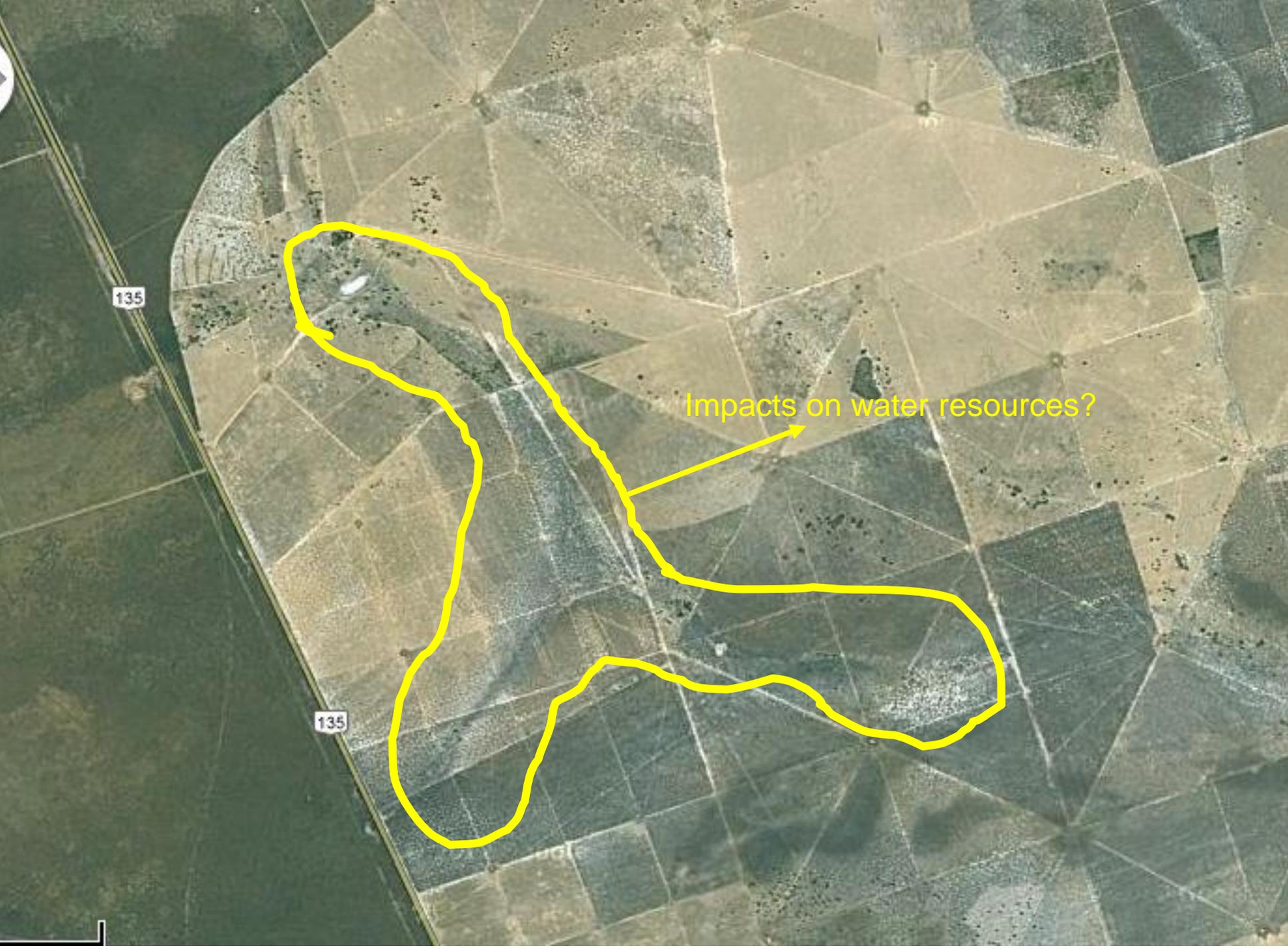




Mapa

Fotos

1 km
2000 pès



135

Impacts on water resources?

135

Proposal

Paper Title	Person responsible for generating draft
<i>I. Livestock/pasture intensification & analysis</i>	
I.1. Livestock productivity & intensification: Review of experience & analysis.	Lee
I.2. Analysis of pasture-based livestock productivity increases in Brazil, 1980 to the present.	Jansle
I.3. Geography of global pasture yields and livestock productivity.	John
<i>II. Energy crop models</i>	
II.1. Process-based cane model.	Keith & Shujiang
II.2. Multi-crop empirical model.	Keith & Shujiang
<i>III. Database development</i>	
II.1. Extending land use and food production models to account for mixed crop-livestock systems and urban food production.	John
II.2. Geospatial land databases: Review & Assessment	Jansle & André

Proposal outline

Geospatial Analysis and Modeling Related to Bioenergy

I. Introduction - Lee

II. Background

II.1. The GSB and LACAf projects. Lee

II.2. Land use and intensification. Lee

II.3. Livestock production and intensification. John.

II.4. Crop modeling. Keith, Shujiang, and Beauclair

II.5. Geospatial databases and analysis Lee.

III. Project rationale, objectives, and management.

IV. Methodology.

IV.1. Livestock intensification. John.

IV.2. Crop modeling. Keith/Shujiang

IV.3. Database development. Jansle/André

V. Anticipated outcomes and significance. Lee

Appendix: Submitted paper.



THANK YOU!!