Summary:

Cerrado land-use mapping: Eduardo Assad (EMBRAPA-CPAC) and Carlos Klink (UnB) have completed Landsat TM-based mapping of areas of native cerrado vegetation conversion for southern Maranhão State and Tocantins. Assad has also done conversion/deforestation mapping for Mata Grosso, Goias, and Southern Pará. Some of these maps may also be available for LBA.

1. Data Set Overview

Data Set Identification:
Land Cover Evaluation of the State of Tocantins, Brazil. Source: Eduardo Assad (EMBRAPA-CPAC) and Carlos Klink (UnB). Assad and Klink have completed Landsat TM-based mapping of areas of native cerrado vegetation conversion for southern Maranhão State, Goais, and Tocantins. The digitized maps of cerrado conversion in this dataset concern Goias and Tocantins only. Assad has also done conversion and deforestation mapping for Mata Grosso, and Southern Pará. Some of these maps may also be available for LBA.

Data Set Introduction:
This dataset consists of 80 files showing various landuse classes and drainage basins in the State of Tocantins.

Objective/Purpose:
These data were originally produced by the Brazilian Agricultural Research Corporation of the Ministry of Agriculture and Food Supply (EMBRAPA), and were processed and projected to geographic coordinates by WHRC to make them more useful for LBA researchers. The purpose of these data are to provide up-to-date knowledge of the extent of cerrado conversion of forested lands in the cerrado region of Brazil.

Summary of Parameters:

Landuse Classes

There is no information accompanying this dataset summarizing the creation of the landuse classes mapped. The Land Cover Evaluation of the State of Tocantins, Brazil shows 5 land cover classes and 3 drainage classes (see DATA DESCRIPTION: Data Characteristics: Variable Description/Definition, for a complete listing).

Discussion: Not Available

Related Data Sets: Not Available

2. Investigator(s)

Investigator(s) Name and Title:
Eduardo Delgado Assad, Lucimar Moreira, Heleno Bezerra, Jose Lourenço Da Silva; Peter Schlesinger, M.A., Daniel Nepstad, Ph.D., Paul Lefebvre, M.S

Title of Investigation:
Source Data Title:
Land Cover Evaluation of the State of Tocantins, Brazil.

Data Preparation Title:
Land-use in Amazonia and the Cerrado of Brazil: State of Knowledge and GIS Database

Contact Information:
1) Source Data Investigator:
3. Theory of Measurements

Text

4. Equipment

Sensor/Instrument Description: Not Available
Collection Environment: Not Available
Source/Platform: Not Available
Source/Platform Mission Objectives: Not Available
Key Variables: Not Available
Principles of Operation: Not Available
Sensor/Instrument Measurement Geometry: Not Available
Manufacturer of Sensor/Instrument: Not Available
Calibration:
Specifications: Not Available
Tolerance: Not Available
Frequency of Calibration: Not Available
Other Calibration Information: Not Available

5. Data Acquisition Methods

Seventeen Landsat Thematic Mapper (TM) images were acquired from INPE. A series of 1:250,000 scale prints were made from color composites of the TM bands 2, 3, and 4. A series of 1:100,000 scale maps (1968) were acquired from Centro de Cartografia Automatizada do Exército -- Military Automated Cartography Center (CECAUEX) and IBGE.

6. Observations

Data Notes: Not Available
Field Notes: Not Available

7. Data Description

Spatial Characteristics:
The spatial coverage of each map is location dependent, thus only the overall spatial coverage comprises the State of Tocantins.

Location
Min X -53.247
Max X -45.756
Min Y -19.502
Max Y -5.159

In decimal degrees of Longitude and Latitude
Spatial Coverage Map: Not Available
Spatial Resolution: 1:250,000
Projection:
Geographic, Units = DD, Spheroid = NAD27
Grid Description: Not Applicable
Temporal Characteristics:
Temporal Coverage:
Basemaps (1968), satellite images range from July 1994-December 1995.
Temporal Coverage Map: Not Available
Temporal Resolution: Not Applicable
Data Characteristics:
Parameter/Variable:
Land Cover
Variable Description/Definition:
Land Cover Drainage
Forest Principal Rivers
Cerrado Secondary Rivers
Campo Tertiary Rivers
Arropecuaria
Sede Municipal
Unit of Measurement: Nonw
Data Source:
Agricultural Research Corporation of the Ministry of Agriculture and Food Supply (EMBRAPA), Centro de Cartografia Automatizada do Exército -- Military Automated Cartography Center (CECAUEX) and IBGE.
Data Range: 1-5
Sample Data Record: Not Available

8. Data Organization

Data Granularity:
This dataset consists of 80 tarred and GNU-zipped files of the extension (.TAZ) comprising a total of 12,949,040 bytes.
Data Format:
Within each of the tarred and GNU-zipped files is a compressed file in Arc Info Interchange (.E00) Format.

9. Data Manipulations

Formulae:
10. Errors

Sources of Error: Not Available
Quality Assessment:
Data Validation by Source: Not Available
Confidence Level/Accuracy Judgment: Not Available
Measurement Error for Parameters: Not Available
Additional Quality Assessments: Not Available
Data Verification by Data Center: Not Available

11. Notes

Limitations of the Data: Not Available
Known Problems with the Data: An incorrect datum, North American Datum 1927 (NAD27) was used to process the data at WHRC, due to a lack of information; the original data were created using the South American Datum 1969 (SAD69). A 40 meter error was calculated by measuring the discrepancy between a number of points using both datums. The amount of error is insignificant considering the scale of the data.
Usage Guidance:
The files in the subdirectory \LEGG, are included because they existed in the source as an artifact of the software used to produce these data originally, and may be necessary for some users in Brazil, because of software differences. Measurements made with geographic analysis software available in North America and Europe will not require those (LEGG) files.
Any Other Relevant Information about the Study: Not Available

12. Application of the Data Set

These data might be used to measure the extent of major land covers in the state of Goias and Tocantins, to aid in land cover classification, and be used as a basis for land use change detection.

13. Future Modifications and Plans

Not Available

14. Software

Software Description:
Two softwares are required to read the files in this dataset:
the shareware tar program tar.exe
the GNU compression utility gzip.exe
Software Access:
The GNU-gzip program (gzip.exe) and shareware tar program (tar.exe) are available via Anonymous FTP from the following site: wuarchive.wustl.edu, in the directory, /systems/msdos/gnuish, files: gzip124x.zip and gnutar.zip

15. Data Access

Contact Information:
1) Source Data Contact:
Dr. Eduardo Assad / Carlos Klink
EMBRAPA-CPAC / UnB
Email: assad@sede.embrapa.br / klink@guarany.cpd.unb.br
2) Data Preparation Contact:
Paul Lefebvre
Woods Hole Research Center
149 Woods Hole Rd.
Falmouth, MA 02540
Phone: (508)540-9900
Fax: (508)540-9700
Email: paul@whrc.org

Data Center Identification: Not Applicable
Procedures for Obtaining Data: Not Available
Data Center Status/Plans: Not Available

16. Output Products and Availability

Not Available

17. References

The files making up this dataset were originally created by Eduardo Delgado Assad, Lucimar Moreira, Heleno Bezerra, and Jose Lourenco Da Silva (EMBRAPA-CPAC).

The original maps were prepared by:

Eduardo Delgado Assad, Lucimar Moreira, Heleno Bezerra, and Jose Lourenco Da Silva (EMBRAPA-CPAC), under GRANT#.

This version of the maps was made available by:

Peter Schlesinger / Dan Nepstad / Paul Lefebvre
Woods Hole Research Center

Landsat TM Satellite Imagery Data Used Ordered by Map Number

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18. Glossary of Terms

Not Available

19. List of Acronyms

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20. Document Information

Document Revision Date: 
October 26, 2004

Document Review Date: 
Not Available

Document ID: 
(currently leave this blank)

Citation: 
(currently leave this blank)

Document Curator: 
Not Available

Document URL: 
http://www.whrc.org/ourwork/mapping/lba_datasets/index.html