



[DAAC Home](#) > [Data](#) > [Field Campaigns](#) > [LBA \(Amazon\)](#) > [Data Set Documentation](#)

LBA-ECO LC-09 Natural, Infrastructure, and Boundary Features, Amazonian Sites, Brazil

Get Data

Revision date: September 30, 2010

Summary:

This data set includes 16 zipped archives of shapefiles of cities, rivers and streams, roads, and study area boundaries of several Amazonian study sites: Altamira, Santarem, Bragantina, and Ponta de Pedras, in the state of Para, and one site at Machadinho D'Oeste, in the state of Rondonia. Data from Brazil were digitized from Instituto Nacional de Colonizacao e Reforma Agrária (INCRA) maps and other data from Instituto Brasileiro de Geografia e Estatística (IBGE). These products were prepared in the 2000-2004 time period. The data of creation for the source material is unknown.

Data Citation:

Cite this data set as follows:

Brondizio, E.S., M. Batistella, and E.F. Moran. 2010. LBA-ECO LC-09 Natural, Infrastructure, and Boundary Features, Amazonian Sites, Brazil. Data set. Available on-line [<http://daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A.
doi:10.3334/ORNLDAAC/986

Implementation of the LBA Data and Publication Policy by Data Users:

The LBA Data and Publication Policy [http://daac.ornl.gov/LBA/lba_data_policy.html] is in effect for a period of five (5) years from the date of archiving and should be followed by data users who have obtained LBA data sets from the ORNL DAAC. Users who download LBA data in the five years after data have been archived must contact the investigators who collected the data, per provisions 6 and 7 in the Policy.

This data set was archived in October 2010. Users who download the data between October 2010 and September 2015 must comply with the LBA Data and Publication Policy.

Data users should use the Investigator contact information in this document to communicate with the data provider. Alternatively, the LBA Web Site [<http://lbaeco-archive.ornl.gov/>] in Brazil will have current contact information.

Data users should use the Data Set Citation and other applicable references provided in this document to acknowledge use of the data.

Table of Contents:

- [1 Data Set Overview](#)
- [2 Data Characteristics](#)
- [3 Applications and Derivation](#)
- [4 Quality Assessment](#)
- [5 Acquisition Materials and Methods](#)
- [6 Data Access](#)
- [7 References](#)

1. Data Set Overview:

Project: LBA (Large-Scale Biosphere-Atmosphere Experiment in the Amazon)

Activity: LBA-ECO

LBA Science Component: Land Use and Land Cover

Team ID: LC-09 (Moran / Batistella)

The investigators were Moran, Emilio Federico; Batistella, Mateus; Adams, Ryan Thomas; Boucek, Bruce William; Brondizio, Eduardo S.; D'Antona, Alvaro; Demming, Kristin Rooke; Fiorini, Stefano; Fudemma, Celia Regina Tomiko; Hedin, Lars; Hetrick, Scott S.; Jensen, Ryan R.; Lu, Dengsheng; Ludewigs, Thomas; Mausel, Paul; McGroddy, Megan; Menzies, John Iral; Navarro, Doris Graziela; Ponzoni, Flavio Jorge; Randolph, J.C.; Schmid, Hans Peter E.; Siqueira, Andrea Dalledone; Toniolo, Maria Angelica; Valeriano, Dalton De Morisson; Valladares, Gustavo Souza; VanWey, Leah and Yu, Genong . You may contact Brondizio, Dr Eduardo S. (ebrondiz@indiana.edu) .

LBA Data Set Inventory ID:LC09_GIS_Study_Areas

This data set includes 16 zipped archives of shapefiles of cities, rivers and streams, roads, and study area boundaries of several Amazonian study sites: Altamira, Santarem, Bragantina, and Ponta de Pedras, in the state of Para, and 1 site at Machadinho D'Oeste, in the state of Rondonia. Data from Brazil were digitized from Instituto Nacional de Colonizacao e Reforma Agrária (INCRA) maps and other data from Instituto Brasileiro de Geografia e Estatística (IBGE).

For additional information, please see the following web sites:

- Anthropological Center for Training and Research on Global Environmental Change (ACT) at Indiana University (<http://www.indiana.edu/~act/>)
- The Center for the Study of Institutions, Population and Environmental Change (CIPEC) at Indiana University (<http://www.indiana.edu/~cipec/>)

Related Data Sets:

- [LBA-ECO LC-09 Vegetation Composition and Structure in the Brazilian Amazon: 1992-1995](#) (Vegetation composition and structure data at nearby sample sites)
- [LBA-ECO LC-09 Soil Composition and Structure in the Brazilian Amazon: 1992-1995](#) (Soil composition and structure data at nearby sample sites)
- [LBA-ECO LC-09 Daily Precipitation for Altamira and Santarem, Para, Brazil: 1961-1998](#) (Precipitation data at nearby sample sites)
- [LBA-ECO LC-09 Landsat TM and ETM+ Data, Sites in Rondonia and Para, Brazil: 1985-2004](#) (Landsat TM data at nearby sample site)

2. Data Characteristics:

This data set includes zipped archives of shapefiles of cities, rivers and streams, roads, and study area boundaries of five Amazonian study sites: Altamira, Santarem, Bragantina, and Ponta de Pedras, in the state of Para, and 1 site at Machadinho D'Oeste, in the state of Rondonia. Data from Brazil were digitized from INCRA maps and other data from IBGE. All data have been rectified (see individual file information below).

Amazonian Study Sites and Shapefiles

1. Altamira

Data files included (zipped archive file size):

- 1) gis_altamira_cities.shp (2 kb) UTM Zone 22S, GCS SAD-69
- 2) gis_altamira_rivers.shp (391.3 kb) UTM Zone 22S, GCS SAD-69
- 3) gis_altamira_roads.shp (119.2 kb) UTM Zone 22S, GCS SAD-69
- 4) gis_altamira_studyarea.shp (2.2 kb) UTM Zone 22S, GCS SAD-69

2. Santarem

Data files included (zipped archive file size):

- 1) gis_santarem_cities.shp (12.5 kb) UTM Zone 21S, GCS SAD-69
- 2) gis_santarem_rivers.shp (562.9 kb) WGS 1984
- 3) gis_santarem_roads.shp (223.7 kb) UTM Zone 21S, GCS SAD-69
- 4) gis_santarem_studyarea.shp (44.5 kb) UTM Zone 21S, GCS SAD-69

3. Bragantina

Data files included (zipped archive file size):

- 1) gis_bragantina_rivers.shp (109.2 kb) UTM Zone 22S, GCS SAD-69
- 2) gis_bragantina_roads.shp (28.4 kb) UTM Zone 22S, GCS SAD-69
- 3) gis_bragantina_studyarea.shp (2 kb) UTM Zone 22S, GCS SAD-69 (Brazil)

4. Ponta de Pedras

Data files included (zipped archive file size):

- 1) gis_pontadepedras_cities.shp (3.9 kb) UTM Zone 22S, GCS SAD-69
- 2) gis_pontadepedras_studyarea.shp (2.1 kb) UTM Zone 22S, WGS 1984

5. Rondonia

Data files included (zipped archive file size):

- 1) gis_rondonia_cities.shp (4.1 kb) UTM Zone 20S, GCS SAD-69
- 2) gis_rondonia_roads.shp (56.1 kb) UTM Zone 20S, GCS SAD-69
- 3) gis_rondonia_studyarea.shp (33.6 kb) UTM Zone 20S, GCS SAD-69

Data Attribute Tables for Each Shapefile Type Include the Following:

1. Cities :

- 1) FID - ID number randomly assigned
- 2) Shape - indicating the shape is a polygon
- 3) ObjectID - ID number randomly assigned
- 4) Shape_Area - area of polygon
- 5) Shape_Leng - length of polyline
- 6) Name - name of city

2. Rivers and Streams:

- 1) FID - ID number randomly assigned
- 2) Shape - indicating the shape is a polyline
- 3) FNODE_ - line node
- 4) TNODE_ - line node
- 5) LPOLY_ - line information
- 6) RPOLY_ - line information
- 7) Shape_Leng - length of polyline

3. Roads:

- 1) FID - ID number randomly assigned
- 2) Shape - indicating the shape is a polyline
- 3) ObjectID - ID number randomly assigned
- 4) FNODE_ - line node
- 5) TNODE_ - line node
- 6) LPOLY_ - line information
- 7) RPOLY_ - line information
- 8) Shape_Leng - length of polyline

4. Study Area Boundaries:

- 1) FID - ID number randomly assigned
- 2) ObjectID - ID number randomly assigned
- 3) Shape - indicating the shape is a polygon
- 4) Shape_Leng - length of polygon perimeter
- 5) Shape_Area - area of polygon

Site boundaries: (All latitude and longitude given in degrees and fractions)

Site (Region)	Westernmost Longitude	Easternmost Longitude	Northernmost Latitude	Southernmost Latitude	Geodetic Datum
Para Western (Santarem) - Altamira	-53.391662	-52.314864	-3.109505	-3.650612	South-American Datum, 1969

(Para Western (Santarem))					(SAD-69)
Para Western (Santarem) - Santarem-Cuiaba Road (Para Western (Santarem))	-56.599583	-51.450417	-1.640417	-4.729583	South-American Datum, 1969 (SAD-69)
Rondonia - Machado D'Oeste (Rondonia)	-62.423526	-61.796284	-9.287310	-10.201205	South-American Datum, 1969 (SAD-69)
Para Eastern (Belem) - Bragantina (Para Eastern (Belem))	-48.768490	-47.555277	-1.248441	-3.111125	South-American Datum, 1969 (SAD-69)
Para Eastern (Belem) - Ponta de Pedras (Para Eastern (Belem))	-49.103723	-48.339646	-1.211024	-1.754206	World Geodetic System, 1984 (WGS-84)

Time period:

- The data set covers the period 1985/01/01 to 2004/12/31.
- Temporal Resolution: one time

Platform/Sensor/Parameters measured include:

- TOPOGRAPHIC MAP / DIGITIZER / LAND MANAGEMENT
- TOPOGRAPHIC MAP / DIGITIZER / LAND COVER

3. Data Application and Derivation:

Data to be used in spatial analysis of land use and land cover change.

4. Quality Assessment:

Topographic maps were georeferenced with RMS<1.0; digitization of topographic maps was conducted at the finest scale possible while still maintaining visual orientation of the rest of the map to allow for accurate tracing and digitization.

5. Data Acquisition Materials and Methods:

Data from Brazil were digitized from INCRA maps and other data from IBGE (Brazil).

Please refer to the following websites:

-INCRA (<http://www.incra.gov.br>)

-IBGE (<http://www.ibge.gov.br>)

Shapefiles were created from digitized maps that were scanned and georeferenced to previously rectified images/data using ESRI-ArcGIS 9.1 and ERDAS Imagine 8.7.

6. Data Access:

This data is available through the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC).

Data Archive Center:**Contact for Data Center Access Information:**

E-mail: uso@daac.ornl.gov

Telephone: +1 (865) 241-3952

7. References:

Instituto Nacional de Colonizaco e Reforma Agrria (INCRA). Maps from INCRA web site, <http://www.incra.gov.br>. Dates unknown.

Instituto Brasileiro de Geografia e Estatística (IBGE). Maps and other data from web site, <http://www.ibge.gov.br>. Dates unknown.

□ **Home**

About Us

Who We Are
User Working Group
Biogeochemical Dynamics
Data Citation Policy
News
Newsletters
Workshops

Products

Product Overview
Field Campaigns
Validation
Regional/Global
Model Archive

Data

Complete Data Set List
Search for Data
Field Campaigns
Validation
Regional/Global
Model Archive

Tools

Data Search
Site Search
Search by DOI
WebGIS
SDAT
MODIS Land Subsets
THREDDS

Help

FAQs
Tutorials
Data Management
Archival Interest

□ **Contact Us**