

LBA-ECO LC-01 National, Provincial, and Park Boundaries, Ecuador

Summary:

This data set contains the national and provincial boundaries of Ecuador as well as the boundaries of two national parks: the Cuyabeno Wildlife Reserve and the Yasuni National Park. There are four data files in ESRI ARCGIS Shapefile format within this data set. Each shape file has been compressed into a single compressed file (*.zip).

Data Citation:

Cite this data set as follows:

Bilsborrow, R.E., S.J. Walsh, and B. Frizzelle. 2012. LBA-ECO LC-01 National, Provincial, and Park Boundaries, Ecuador. Data set. Available on-line [<http://daac.ornl.gov/>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A.
<http://dx.doi.org/10.3334/ORNLDAAC/1057>

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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 Users who download LBA data in the five years after data have been archived must contact the investigators who collected the data, per provisions 6 and 7 in the Policy.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 January of 2012. Users who download the data between January 2012 and December 2016 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 website [<http://lba.inpa.gov.br/lba/>] 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: Human Dimensions

Team ID: LC-01 (Bilborrow / Walsh / Garcia)

The investigators were Bilborrow, Richard E. and Walsh, Stephen J. You may contact Bilborrow, Richard E. (richard_bilborrow@unc.edu); Walsh, Stephen J. (swalsh@email.unc.edu) and Frizzelle, Brian G. (bgf@email.unc.edu).

LBA Data Set Inventory ID: LC01_Boundaries_Ecuador

This data set contains the national and provincial boundaries of Ecuador as well as the boundaries of two national parks: the Cuyabeno Wildlife Reserve; and the Yasuni National Park.

Related Data Sets:

- [LBA-ECO LC-01 Hydrography, Morphology, Edaphology Maps, Northern Ecuadorian Amazon](#) (Hydrographic, morphologic and edaphologic features in the northern Ecuadorian Amazon)
- LBA-ECO LC-01 Topographic Data for Intensive Study Areas, Northern Ecuadorian Amazon (Topographic data from the 4 intensive study areas located in the northern Ecuadorian Amazon region)
- [LBA-ECO LC-01 City, Community, and Road Maps, Northern Ecuadorian Amazon: 1990-2002](#)
- LBA-ECO LC-01 Landsat MSS, TM, ETM+ Imagery, Northern Ecuadorian Amazon : 1973-2002

2. Data Characteristics:

There are 4 data files with this data set. The filenames have the file extension ".zip". These are zipped ESRI ArcGIS shapefiles. When unzipped, each shape file contains six files (*.shx, *.bdf, *.prj, *.sbn, *.sbx, and *.shp). Each shape file contains polygon geometry, with the following projection parameters:

Projected Coordinate System: WGS_1984_UTM_Zone_18S
Projection: Transverse_Mercator
False_Easting: 500000.00000000
False_Northing: 10000000.00000000
Central_Meridian: -75.00000000
Scale_Factor: 0.99960000
Latitude_Of_Origin: 0.00000000
Linear Unit: Meter
Geographic Coordinate System: GCS_WGS_1984
Datum: D_WGS_1984
Prime Meridian: Greenwich
Angular Unit: Degree

Study Area: Country of Ecuador.

bdr_ecuador.zip: national boundary file

Parameters or Variables: Attribute items are in typical ARC/INFO polygon format. There are no additional relevant attributes, as all polygons are part of the nation of Ecuador.

ec_provinces.zip: provincial boundaries file

Data attribute table contains the following attributes:

- Pro_codigo: Province code
- Pro_descri: Name of province
- Region: C=Costa, the coastal region; O=Oriente (east), the Amazonian region; S=Sierra, the Andean region

cuyabeno.zip: Cuyabeno Reserve boundaries file. This file contains the boundary of the Reserva de Produccion Faunistica, or Cuyabeno Wildlife Reserve, in the northern Oriente of Ecuador.

Spatial Coverage:

- West Bounding Coordinate: -76.608494
- East Bounding Coordinate: -75.245986
- North Bounding Coordinate: 0.120355
- South Bounding Coordinate: -0.831576
- Projection: Universal Transverse Mercator Zone 18S Horizontal_Datum_Name: D_WGS_1984
Ellipsoid_Name: WGS_1984

yasuni.zip: The Yasuni National Park boundaries file

Spatial Coverage:

- West Bounding Coordinate: -76.775718
- East Bounding Coordinate: -75.416091
- North Bounding Coordinate: -0.440672
- South Bounding Coordinate: -1.705350
- Projection: Universal Transverse Mercator Horizontal_Datum_Name: D_WGS_1984

Variables: Attribute items are in typical ARC/INFO polygon format. Attributes requiring additional explanation are: GROUP - The government organization that oversees the park; in this case, it is coded INEFAN. NAME - The name of the park; in this case, it is Yasuni National Park.

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

Site (Region)	Westernmost Longitude	Easternmost Longitude	Northernmost Latitude	Southernmost Latitude	Geodetic Datum
Ecuador	-81.023841	-75.19056	1.464504	-5.02194	World Geodetic System, 1984 (WGS-84)

Time period:

- The data set covers the period: 1998/01/01 to 2001/12/31
- Temporal Resolution: not applicable. Data generated from maps published in 1998 and vector digital data in 2001.

Platform/Sensor/Parameters measured include:

- MAPS / DIGITIZER / POLITICAL DIVISIONS

3. Data Application and Derivation:

Typical application of data: Cartography.

Derivation techniques for the national boundary: The Ecuador Provincial Boundaries coverage was converted to a national boundary using the DISSOLVE command in ARC/INFO. This created one polygon representing the continental extent of Ecuador, plus one polygon for each island.

Derivation Techniques and Algorithms for the provincial boundaries: Attribute items are in typical ARC/INFO polygon format. The only relevant attribute that requires explanation is: PRO_DESCR1 - The name of the province; there may be multiple polygons for those provinces that include islands.

4. Quality Assessment:

Positional accuracy: Horizontal accuracy is unknown but assumed to be within the NMAS standards for maps of these scales (1:200,000-scale, ~ 100 m).

5. Data Acquisition Materials and Methods:

Site description

The Northeastern Ecuadorian Amazon is significant from social, biophysical and geographical basis, with complex terrain and landuse/landchange variability. The western Amazon region, bordering the Andes and lying at the headwaters of the Amazon River basin, possesses several major centers of endemism, including the Napo. Settlers in the Napo and Sucumbios provinces, the two dominant Cantons or States, settled on 50 ha plots, clearing primary forest to grow subsistence crops, coffee, and for pasturage. Maps indicate that there are pockets of fertile volcanic soils due to the proximity of the Andes, and in general, the soil is more fertile in western Amazonia than in Brazil. The annual precipitation is high (2,800 mm/year), and so there is no distinct dry-season. Despite the regions biodiversity and carbon sequestration significance, agricultural settlement and concurrent deforestation threaten the region. A comprehensive description of the Oriente can be found in Messina and Walsh (2001).

Data acquisition

National and provincial boundaries data were obtained in vector digital data format from Ecociencia in Quito, Ecuador in 2001.

For the boundary of the Yasuni National Park: A paper map entitled Parque Nacional Yasuni, 1:200,000 scale published in 1998, was obtained from Proyecto PETRAMAZ; cartographer: Bertrand Dubaele.

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:

Messina, J.P. and S.J. Walsh. 2001. 2.5D Morphogenesis: Modeling Landuse and Landcover Dynamics in the Ecuadorian Amazon. *Plant Ecology* 156 (1): 75-88.

Related Publications

- Pan, W.K.Y., S.J. Walsh, R.E. Bilborrow, B.G. Frizzelle, C.M. Erlien, and F. Baquero. 2004. Farm-level models of spatial patterns of land use and land cover dynamics in the Ecuadorian Amazon. *Agriculture Ecosystems & Environment* 101(2-3):117-134.