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## LBA-ECO LC-15 SRTM30 Digital Elevation Model Data, Amazon Basin: 2000

### Get Data

Documentation Revision Date: 2020-12-01

Dataset Version: 1.1

### Summary

This dataset provides a subset of the SRTM30 Digital Elevation Model (DEM) elevation and standard deviation data for the Amazon Basin. SRTM30 is a near-global digital elevation model (DEM) comprising a combination of data from the Shuttle Radar Topography Mission (SRTM), flown in February, 2000, and the earlier U.S. Geological Survey's GTOPO30 data set. The SRTM30 resolution is 30 arc-sec or about 1 km. In processing the SRTM data, to combine with GTOPO30, the data were resampled from 3 arc-sec to 30 arc-sec. Provided here are the mean elevation and the standard deviation (STD) of the data points used in the averaging. The STD is thus an indication of topographic roughness useful in some applications.

There are two GeoTIFF (.tif) files provided in two.zip files with this dataset. One file is the mean elevation of the Amazon basin and the second file is the standard deviation of the averaged elevation. Each zip file also contains a text file (.txt) file that provides the metadata pertaining to the .tif file.

### 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](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 Users who download LBA data in the five years after data have been archived must contact the investigators who collected the data, per provisions 6 and 7 in the policy.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 dataset was archived in August 2013. Users who download the data between August 2013 and July 2018 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.

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

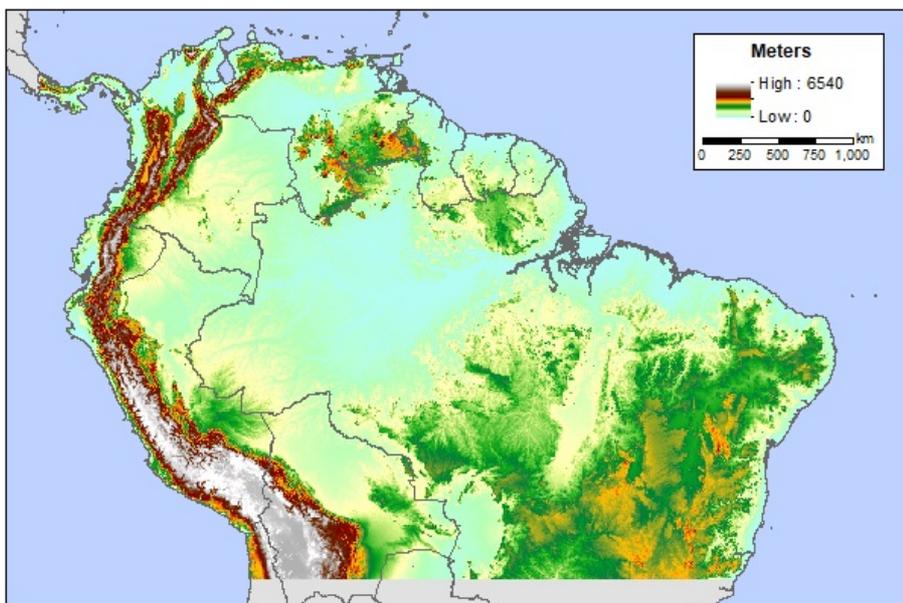


Figure 1. This figure depicts the data in the file SA\_srtm\_mosaic\_30arcsec\_reg\_hgt.tif.

### Citation

Saatchi, S.S. 2013. LBA-ECO LC-15 SRTM30 Digital Elevation Model Data, Amazon Basin: 2000. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1181>

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## 1. Dataset Overview

**Project:** LBA-ECO

**Activity:** Regional Vegetation Variables

**LBA Science Component:** Land Use and Land Cover

**Team ID:** LC-15 (Saatchi / Alvala)

The investigator was Saatchi, Dr. Sassan S. You may contact Saatchi, Dr. Sassan S. ([sassan.saatchi@jpl.nasa.gov](mailto:sassan.saatchi@jpl.nasa.gov)).

**LBA Data Set Inventory ID:** LC01\_SRTM\_Topography

This dataset provides a subset of the SRTM30 Digital Elevation Model (DEM) elevation and standard deviation data for the Amazon Basin. SRTM30 is a near-global digital elevation model (DEM) comprising a combination of data from the Shuttle Radar Topography Mission (SRTM), flown in February, 2000, and the earlier U.S. Geological Survey's GTOPO30 data set. The SRTM30 resolution is 30 arc-sec or about 1 km.

In processing the SRTM data, to combine with GTOPO30, the data were resampled from 3 arc-sec to 30 arc-sec. Provided here are the mean elevation and the standard deviation (STD) of the data points used in the averaging. The STD is thus an indication of topographic roughness useful in some applications.

**Related Data Set:**

[LBA-ECO LC-15 Aerodynamic Roughness Maps of Vegetation Canopies, Amazon Basin: 2000](#) (image analysis for same time period)

## 2. Data Characteristics

**Spatial Coverage:** Amazon basin

**Temporal Coverage:** 2000-02-11 to 2000-02-22

**Temporal Resolution:** One-time campaign

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

Site (Region)	Westernmost Longitude	Easternmost Longitude	Northernmost Latitude	Southernmost Latitude
Amazon basin	-82.7209	-33.5739	13.8583	-21.1277

**Data file information**

There are two GeoTIFF (.tif) files provided in two.zip files with this dataset. One file is the mean elevation of the Amazon basin and the second file is the standard deviation of the averaged elevation. Each zip file also contains a text (.txt) file that provides metadata pertaining to the .tif file.

**Data file names**

File #1: **SA\_srtm\_mosaic\_30arcsec\_reg.hgt.tif**: Mean elevation.

Associated text file: **SA\_srtm\_mosaic\_30arcsec\_reg.hgt.txt**

File #2: **SA\_srtm\_mosaic\_30arcsec\_reg.std.tif**: Standard deviation.

Associated text file: **SA\_srtm\_mosaic\_30arcsec\_reg.std.tif.txt**

**Properties of the data files**

Note: no-data values are 9999.

**File # 1:**

Projection parameters:

- Projected Coordinate System: None
- Geographic Coordinate System: GCS\_WGS\_1984
- Datum: D\_WGS\_1984
- Prime Meridian: Greenwich
- Angular Unit: Degree
- Upper Left coordinates: -82.7209000, 13.8583000
- Lower Left coordinates: -82.7209000, -21.1277000
- Upper Right coordinates: -33.5739000, 13.8583000
- Lower Right coordinates: -33.5739000, -21.1277000
- Center coordinates: -58.1474000, -3.634700

Image Statistics

- Unit: meters
- Minimum: 0
- Maximum: 6540
- Mean: 538.176
- Standard deviation: 884.874

## Projection parameters:

- Projected Coordinate System: None
- Geographic Coordinate System: GCS\_WGS\_1984
- Datum: D\_WGS\_1984
- Prime Meridian: Greenwich
- Angular Unit: Degree
- Upper Left coordinates: -82.7209000, 13.8583000
- Lower Left coordinates: -82.7209000, -21.1277000
- Upper Right coordinates: -33.5739000, 13.8583000
- Lower Right coordinates: -33.5739000, -21.1277000
- Center coordinates: -58.1474000, -3.634700

## Image Statistics

- Unit: meters
- Minimum: 0
- Maximum: 563
- Mean: 10.220
- Standard. deviation: 21.953

### 3. Application and Derivation

This dataset may be used in studies requiring topographic data or the determination of surface water area and elevation.

### 4. Quality Assessment

None provided.

### 5. Data Acquisition, Materials, and Methods

#### Site description:

The Amazon basin is nearly 6,000,000 km<sup>2</sup> and is dominated by dense forest. Savannas are found mostly to the north and south of the basin. Deforestation is concentrated along the southern and eastern part of the basin, along highways crossing the region and along the base of the Andes.

#### Data Acquisition:

This dataset provides a subset of the SRTM30 Digital Elevation Model (DEM) elevation and standard deviation data for the Amazon Basin. SRTM30 is a near-global digital elevation model (DEM) comprising a combination of data from the Shuttle Radar Topography Mission (SRTM), flown in February, 2000, and the earlier U.S. Geological Survey's GTOPO30 data set. The SRTM30 resolution is 30 arc-sec or about 1 km.

In processing the SRTM data, to combine with GTOPO30, the data were resampled from 3 arc-sec to 30 arc-sec. Provided here are the mean elevation and the standard deviation (STD) of the data points used in the averaging. The STD is thus an indication of topographic roughness useful in some applications.

For additional information on the SRTM, please see the following web site: <https://www2.jpl.nasa.gov/srtm/>

### 6. Data Access

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

[LBA-ECO LC-15 SRTM30 Digital Elevation Model Data, Amazon Basin: 2000](#)

Contact for Data Center Access Information:

- E-mail: [uso@daac.ornl.gov](mailto:uso@daac.ornl.gov)
- Telephone: +1 (865) 241-3952

### 7. References

Saatchi, S. Projects in the Amazon Basin. Retrieved from <http://www-radar.jpl.nasa.gov/carbon/ab/srtm.htm>. Date accessed 20130816.

Saatchi, S., E. Rodriguez, S. Denning, R. Dubayah. 2013. LBA-ECO LC-15 Aerodynamic Roughness Maps of Vegetation Canopies, Amazon Basin: 2000. Data set. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1182>

### 8. Dataset Revisions

This dataset was revised on 11/17/2020 to update the file named SA\_srtm\_mosaic\_30\_arcsec\_reg\_hgt.tif. The no-data values were set to 9999.

