

The ORNL Distributed Active Archive Center (DAAC) is a NASA-sponsored source for biogeochemical and ecological data and services useful in environmental research. The ORNL DAAC currently archives and distributes nearly 900 products categorized as Field Campaign, Land Validation, Regional and Global, or Model Archive.

Please visit us online at <http://daac.ornl.gov> for a comprehensive description of data, services, and tools available from the ORNL DAAC. Current and past news can be found at <http://daac.ornl.gov/news.shtml>.

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<http://www.nasa.gov>

ORNL DAAC News

New Model Product Released

The ORNL DAAC released Landsat Ecosystem Disturbance Adaptive Processing System (LEDAPS) software product.

The LEDAPS code processes Landsat imagery to surface reflectance, using atmospheric correction routines developed for the Terra MODIS instrument (Vermote et al., 1997).

This version was developed by Jeff Masek (NASA-GSFC) and colleagues.

LEDAPS is a preprocessing chain that includes Landsat 1T calibration, TOA reflectance, cloud masking, and atmospheric correction. This version is designed to work with the standard Web enabled EROS L1T product for Landsat-5 and Landsat-7.



Example of LEDAPS atmospheric correction.

ISLSCP Initiative II Data Set Released

The ISLSCP II Cloud and Meteorology Parameters was published by the ORNL DAAC in April. The data set, prepared by P.W. Stackhouse and S. K. Gupta, contains monthly data for several cloud and meteorological parameters including monthly surface skin temperature, monthly total column ozone, and water vapor burdens. All monthly parameters include files with a monthly mean value, a monthly standard deviation, and monthly minimum and maximum values for the period 1986-1995.

The ISLSCP Initiative II data collection is designed to support modeling studies of the global carbon, water and energy cycle. This data collection contains 50 global time series spanning the ten-year period 1986 to 1995 compiled under the guidance of Forrest Hall and colleagues at NASA's Goddard Space Flight Center. The data for Initiative II were acquired from a number of U.S. and international agencies, universities, and institutions, then co-registered to equal-angle grids of one degree, one-half and one-quarter degree resolution and reformatted into a common ASCII format.

NACP Data Sets Released



The first year of forest disturbance map for an area in Mississippi where industrial forestry is prevalent. (From NACP North American Forest Dynamics Project: Forest Disturbance and Regrowth Data.)

The North American Carbon Program (NACP) is a multi-disciplinary research program designed to obtain scientific understanding of North America’s carbon sources and sinks and of the changes in carbon stocks needed to meet societal concerns, and to provide tools for decision makers.

Three data sets were added to the NACP collection recently.

The NACP North American Forest Dynamics Project: Forest Disturbance and Regrowth Data provides the results of time-series analyses of Landsat imagery for 55 selected forested sites across the conterminous U.S.A. The output is a pair of disturbance data products for each site, one showing the first year of disturbance in the time series, the other showing the last year of disturbance during the time period 1984-2009.

The NACP Aboveground Biomass and Carbon Baseline Data (NBCD 2000), U.S.A., 2000 data set provides a high-resolution (30 m) map of year-2000 baseline estimates of basal area-weighted canopy height, aboveground live dry biomass, and standing carbon stock for the conterminous United States.

The NACP Forest Age Maps at 1-km Resolution for Canada (2004) and the U.S.A. (2006) data set provides forest age map products at 1-km resolution for Canada and the United States (U.S.A.). These continental forest age maps were compiled from forest inventory data, historical fire data, optical satellite data, and the images from NASA’s Landsat Ecosystem Disturbance Adaptive Processing System (LEDAPS) project.

BigFoot Meteorological Data Set Released

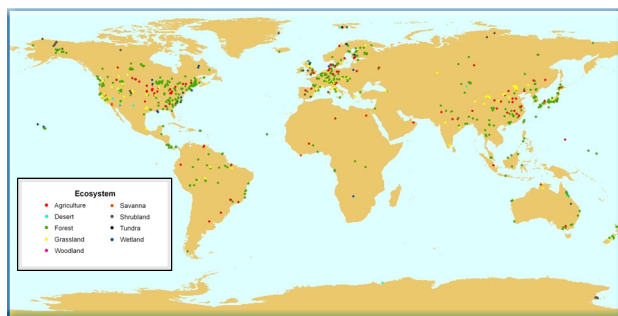


February saw the release of a data set associated with The BigFoot project: BIGFOOT Meteorological Data for North and South American Sites, 1991-2004. The data set was prepared by D.P. Turner, and W.D. Ritts and contains daily meteorological measurements for nine EOS Land Validation Sites located from Alaska to Brazil from 1991 to 2004. Each site is representative of one or two distinct biomes, including the Arctic tundra; boreal evergreen needleleaf forest; temperate cropland, grassland, evergreen needleleaf forest, and deciduous broadleaf forest; desert grassland and shrubland; and tropical evergreen broadleaf forest. The meteorological data were needed to run ecosystem process models used for scaling GPP and NPP products, for monitoring interannual variability, and for model testing.

Data Sets From Soil Collections

In April, we published A GLOBAL DATABASE OF GAS FLUXES FROM SOILS AFTER REWETTING OR THAWING, VERSION 1.0, a database containing information compiled from published studies on gas flux from soil following rewetting or thawing. This database includes 222 field and laboratory observations focused on re-wetting of dry soils, and 116 field laboratory observations focused on thawing of frozen soils studies conducted from 1956 to 2010.

In March, a new version of our GLOBAL DATABASE OF SOIL RESPIRATION DATA, VERSION 2.0 was published. This data set provides an updated soil respiration database (SRDB), a near-universal compendium of published soil respiration (RS) data. The database encompasses all published studies that report at least one of the following data measured in the field (not laboratory): annual RS, mean seasonal RS, a seasonal or annual partitioning of RS into its sources fluxes, RS temperature response (Q10), or RS at 10 degrees C.



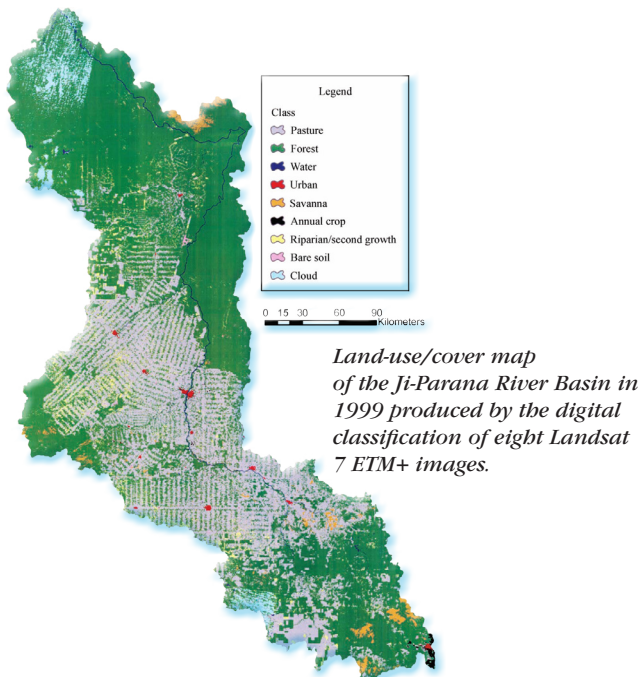
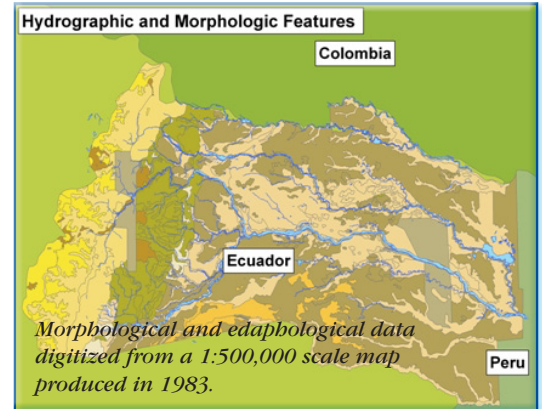
28 LBA Data Sets Published

The Amazon rain forest or Amazonia, is the largest remaining expanse of tropical rain forest on Earth, harboring approximately one-third of all Earth's species. Although the rain forest's area is so large that it reaches out into several different countries, most of its area is located within the Brazilian territory. Despite three centuries of scientific study in Amazonia, only a small fraction of its biological richness has been revealed.

The Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) is an international research initiative conducted from 1995-2005 and led by Brazil. The LBA Project encompasses several scientific disciplines, or components, including Carbon Dynamics, Nutrient Dynamics and Surface Water Chemistry, Trace Gas and Aerosol Fluxes, and Land Cover and Land Use Change.

Spring saw the publication of 28 data sets to the LBA collection, which are all listed on our LBA data set lister page at:

http://daac.ornl.gov/cgi-bin/dataset_lister.pl?p=11.



One data set from the LBA Trace Gases team:

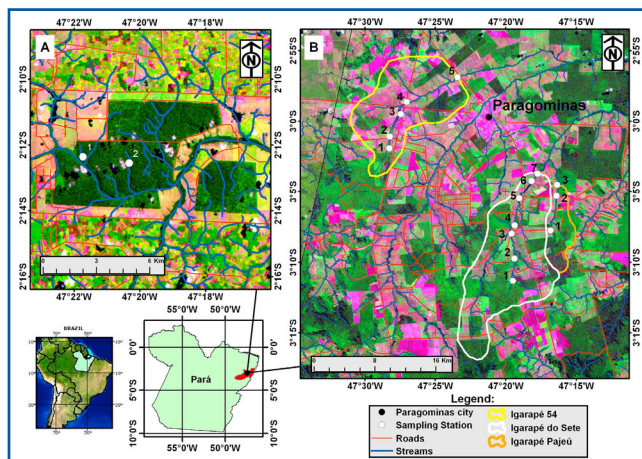
- TG-07 Forest Soil P, C, and N Pools, km 83 Site, Tapajos National Forest.

Four spatial data sets from the Carbon Dynamics teams:

- CD-06 Amazon River Basin Land and Stream Drainage Direction Maps.
- CD-06 Ji-Parana River Basin Land Use and Land Cover Map, Brazil: 1999.
- CD-06 Physical, Political, and Hydrologic Maps, Ji-Parana River Basin, Brazil.
- CD-06 Soil Classification Map, Ji-Parana River Basin, Rondonia, Brazil.

Eleven data sets from the Land Cover and Land Use Change Teams:

- LC-01 Landsat TM Land Use/Land Cover, Northern Ecuadorian Amazon: 1986-1999.
- LC-01 SRTM 90-Meter Digital Elevation Model, Northern Ecuadorian Amazon.
- LC-01 Topographic Data for Intensive Study Areas, Northern Ecuadorian Amazon.
- LC-02 Daily Meteorological Data, Rio Branco, Acre, Brazil: 1970-2001.
- LC-02 Forest Flammability Data, Catuaba Experimental Farm, Acre, Brazil: 1998.
- LC-02 GOES-08 Hot Pixel Data from Acre, Brazil: 1998, 2000, and 2001.
- LC-03 Hypsography, Rivers, Roads, and DEM, Four Areas across Brazilian Amazon.
- LC-03 SAR Images, Land Cover, and Biomass, Four Areas across Brazilian Amazon.
- LC-07 JERS-1 SAR Wetlands Masks and Land Cover, Amazon Basin: 1995-1996.
- LC-08 Passive Ground-based Fire Data, Para and Mato Grosso Brazil: 2001-2002.
- LC-35 Landsat ETM+ Derived Active Fire Masks, Brazilian Amazon: 2001-2003.



The two pristine headwater streams and sample locations identified in Capitão Poço that are part of the Arauai River Basin (2002 LANDSAT imagery) and three study watersheds in Paragominas

Eight data sets from the Nutrient Dynamics Teams:

- LBA-ECO ND-02 Cation Leaching from Forest and Pasture Soils, Para, Brazil.
- LBA-ECO ND-02 CO2 Flux from Soils in Forests and Pastures, Acre, Brazil: 1999-2001.
- LBA-ECO ND-02 Saturated Soil Hydraulic Conductivity, Tapajos National Forest, Brazil.
- LBA-ECO ND-02 Stream Water Chemistry, Paragominas, Para, Brazil: 1999-2005.
- LBA-ECO ND-03 Forest and Pasture Watershed Hydrochemistry, Rondonia, Brazil.
- LBA-ECO ND-04 Secondary Forest Recovery, Structure, and LAI, Central Amazonia, Brazil.
- LBA-ECO ND-04 Secondary Forest Vegetation and Soil Carbon and Nutrient Stocks, Brazil.
- LBA-ECO ND-04 Termite Mound and Soil Characterization, Amazonas, Brazil: 1999-2001.



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Please participate in the NASA Customer Survey



Thanks to everyone who participated in the 2011 survey. Your helpful comments will be considered towards future improvements.

During early September 2012, ORNL DAAC users will receive an email invitation from Claes Fornell International (CFI) Group on behalf of NASA to participate in a Web-based survey about the quality and utility of ORNL DAAC products and services. It takes

approximately 10 minutes to complete this anonymous questionnaire and optional comment fields are provided to address user concerns.

Even if you have completed the survey previously, please participate! Your feedback affects our future performance, and helps us to identify service needs. ORNL DAAC is one of twelve and NASA Earth Observing System and Data Information System (EOSDIS) data centers evaluated by this survey.

ACCESSING ORNL DAAC DATA

Web-based interface:

<http://daac.ornl.gov/>

Advanced data search:

<http://mercury.ornl.gov/ornldaac/>

Anonymous FTP browsing:

<ftp://daac.ornl.gov/data/>

DAAC WebGIS:

<http://daac.ornl.gov/mapserver.shtml>

MODIS Land Products Subsets:

<http://daac.ornl.gov/MODIS/modis.shtml>

DAAC FLUXNET Project:

<http://daac.ornl.gov/FLUXNET/fluxnet.shtml>

DAAC SDAT:

<http://webmap.ornl.gov/wcsdown>

All data from the DAAC are free and are available electronically.

National Aeronautics and Space Administration:

<http://www.nasa.gov>