



SUMMER 2009

ORNL DAAC News

Spatial Data Access Tool (SDAT)

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 more than 825 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. Archived news can be found at <http://daac.ornl.gov/news.shtml>.

Contents:

- Spatial Data Access Tool (SDAT)
- Fifteen LBA Data Sets Released
- DAAC Gets New Look
- Survey

The ORNL DAAC is pleased to announce the release of a new Spatial Data Access Tool (SDAT). SDAT is a Web-based tool that enables users to browse, visualize, and download geospatial data in various user-selected spatial/temporal extents, formats, and projections.

Spatial Data Access

OGC Standards-based Geospatial Data Visualization/Download

The ORNL DAAC provides access to various geospatial data, including ORNL DAAC archived data through Open Geospatial Consortium (OGC) standards-based Web Services ([+] [Web Map Service v1.1.1](#) and [+] [Web Coverage Service v1.0.0](#)). OGC services allow users to select the spatial extent, format, projection and resolution of the data to be previewed and/or downloaded.

Available Data Sets [+] Help

<ul style="list-style-type: none"> ▪ 8 km Global Land Cover Data Set Derived from AVHRR <p style="text-align: center;">[+] Visualize in Google Earth [+] View Full Metadata</p>	
<ul style="list-style-type: none"> ▪ AMAZON RIVER BASIN PRECIPITATION, 1972-1992 <p style="text-align: center;">[+] Visualize in Google Earth [+] View Full Metadata</p>	
<ul style="list-style-type: none"> ▪ Bailey Ecoregions Map of the Continents <p style="text-align: center;">[+] Visualize in Google Earth [+] View Full Metadata</p>	
<ul style="list-style-type: none"> ▪ BIGFOOT LEAF AREA INDEX SURFACES FOR NORTH AND SOUTH AMERICAN SITES, 2000-2003 <p style="text-align: center;">[+] Visualize in Google Earth [+] View Full Metadata</p>	

The SDAT Web interface and some of the data sets available through SDAT.

The data provided through the SDAT include selected ORNL DAAC archived data sets as well as other biogeochemical dynamics related data such as Land Cover, Elevation, Climate classification, Ecoregions, and Soils. A complete list of available data is located at the SDAT interface: <http://webmap.ornl.gov/wcdown>, where users can visualize the data in Google Earth, explore the metadata, or customize and download the data by specifying projection, resolution, format, spatial extent, time period, band, and interpolation method.

SDAT (continued)

Selecting a data set from the SDAT tool produces a Web page with a preview image of the data and gives users various control options (like zoom in/out, pan, select a layer) to interact with the preview image.

The data can then be subsetted, reprojected, resampled, and downloaded directly from within this Web page. Various download file formats such as netCDF, GeoTIFF, and ArcInfo ASCII Grid, are provided for user convenience. SDAT is built on Open Geospatial Consortium (OGC) Web Services, namely, Web Map Service (WMS), and Web Coverage Service (WCS). These services allow users to access the data served by the SDAT inside clients such as ArcGIS, NASA World Wind, and Google Earth. To learn more about using the OGC Web services and the SDAT, go to http://daac.ornl.gov/spatial_data_access.shtml.

- **Collection:** AMAZON RIVER BASIN PRECIPITATION, 1972-1992
- **Native Projection:** WGS 84 (EPSG:4326)
- **Spatial Extent:** N: 5.2, S: -20.0, E: -49.4, W: -79.6
- **Map Units:** degrees
- **Resolution:** 0.2,0.2
- **Start DateTime:** 1972-01-01T00:00
- **End DateTime:** 1972-12-31T23:59
- **Data Units:** millimeters per month
- **Scale Factor:** 1

Data Customization and Download

Coverage: Amazon Rain fall 1972 (All months)

Use to select a region as the spatial extent to subset data

Select Region function activated

Enhance Image Display

-29.87500, 8.10000
[+] Show Legend

Projection: WGS 84 [?]

Resolution (x, y): 0.2 0.2

Format: GeoTIFF (INT16) -64.375 -56.625

Time: All

Bands: All

Interpolation Method: Nearest Neighbor

OGC WCS Requests:

[+] Show GetCapabilities

[+] Show DescribeCoverage

[+] GetCoverage Request

OGC WMS Requests:

[+] Show GetCapabilities

[+] GetMap Request

Download Reset

SDAT preview image and the features that can be customized by each user.

Fifteen LBA Data Sets Released

The ORNL DAAC recently released 15 data sets associated with the LBA-ECO component of the Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA). The first five data sets investigated the carbon content in headwater streams and soils, soil properties and

nutrient dynamics, and measurements of tree and vine biomass. The research was conducted in Mato Grosso, Brazil, and the data were compiled by Eduardo G. Couto, Carlos Passos, Johannes Lehmann, and colleagues.

(continued on p. 3)

Fifteen LBA Data Sets (continued)

The next five data sets provide measurements of biometry, gas fluxes, and litter decomposition, in disturbed (logged) and undisturbed tropical forest ecosystems at the Tapajos National Forest in Para, Brazil. The data sets on biometry and gas fluxes were compiled by Michael Keller and colleagues. Litter decomposition data was compiled by Megan McGroddy.

Five Pre-LBA data sets were also released: *Pre-LBA TRACE-A*, from the NASA Transport and Atmospheric Chemistry near the Equator-Atlantic (TRACE-A)

field study; *Pre-LBA ISLSCP Initiative I*, from the International Satellite Land Surface Climatology Project (ISLSCP) Initiative I; *Pre-LBA Smoke, Clouds, and Radiation-Brazil (SCAR-B)*; *Pre-LBA Cabare Mapped Land Surface and Vegetation Characteristics, Rondonia, Brazil*; and *Pre-LBA Rondonia Boundary Layer Experiment (RBLE)*. Pre-LBA data were compiled as background information during the 20 years prior to 1998.



Tree and vine diameters were measured in overlapping transects.



Litter bags as installed at a field plot.

LBA is an international research initiative under the leadership of Brazil. The project focuses on the climatological, ecological, biogeochemical, and hydrological functions of Amazonia; the impact of land use change on these functions; and the interactions between Amazonia and the Earth system. The LBA-ECO component focuses on the question: "How do tropical forest conversion, regrowth, and selective logging influence carbon storage, nutrient dynamics, trace gas fluxes, and the prospect for sustainable land use in Amazonia?"

ORNL DAAC Gets New Look!

The ORNL DAAC Web site is getting a facelift. Work is underway to revise the "look and feel" of the Web site, with new features and tools being added to enhance

the user's experience on the site. Look for the new site to appear this fall. The address <http://daac.ornl.gov> will not change.

Please Participate in the NASA Customer Satisfaction Survey



During mid-August and early September, 2009, ORNL DAAC users will receive an e-mail 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.

Please Participate! Your feedback affects our future performance, and helps us to identify science needs. ORNL DAAC is one of twelve NASA Earth Observing System Data and Information System (EOSDIS) data centers evaluated by this survey.

ACCESSING ORNL DAAC DATA

Home Page:

<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>

LBA Project:

<http://daac.ornl.gov/LBA/lba.html>

DAAC FLUXNET Project:

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

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>



ORNL Distributed Active Archive Center
P.O. Box 2008, MS 6407
Oak Ridge National Laboratory
Oak Ridge, TN 37831-6407