

ORNL DAAC News

4 Data Sets Added To ORNL DAAC MODEL ARCHIVE

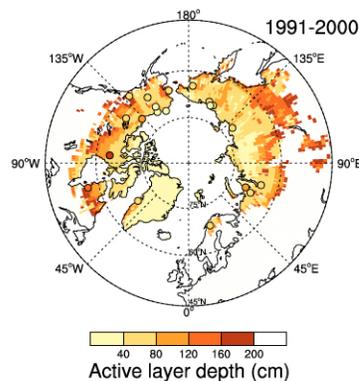
The ORNL Distributed Active Archive Center (DAAC) is a NASA-sponsored source for biogeochemical data and services useful in environmental research. The ORNL DAAC currently archives and distributes more than 1,000 products categorized as Field Campaign, Land Validation, Regional and Global, or Model Archive.

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

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<http://www.nasa.gov>



Permafrost distribution and comparison of simulated and observed active layer depth for the region 45-90 N. (LPJ-WHyMe v1.3.1)

The ORNL DAAC compiles, archives, and distributes environmental numeric data model products including the source code, input data, and output results in two tiers. The first tier supports the storage and retrieval of benchmark model versions, and the second tier supports the association of published research results with specific model implementations.

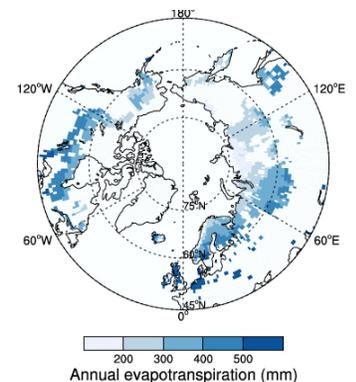
Four model products have been recently released.

LEDAPS Calibration, Reflectance, Atmospheric Correction Preprocessing Code, Version 2. The Land-sat Ecosystem Disturbance Adaptive Processing System (LEDAPS) is a NASA project to map disturbance, regrowth, and permanent forest conversion across North America (Masek et al., 2006). The LEDAPS processes Landsat imagery to surface reflectance, using atmospheric correction routines developed for the Terra MODIS instrument (Vermette et al., 1997): <http://dx.doi.org/10.3334/ORNLDAAC/1146>.

Ecosystem Demography Model: Scaling Vegetation Dynamics Across South America. This model product contains the source code for the Ecosystem Demography Model (ED version 1.0) as well as model input and output data for a portion of South America including the Brazilian Amazon. The model output data are estimates of potential average live biomass (kg C/m²), potential average soil carbon (kg C/m²), and potential above-ground net primary production (NPP) (kg C/m²/yr) at 1.0 degree resolution: <http://dx.doi.org/10.3334/ORNLDAAC/1149>.

Ecosystem Demography Model: U.S. Ecosystem Carbon Stocks and Fluxes, 1700-1990. This model product contains the source code for the Ecosystem Demography Model (ED version 1.0) as well as model input and output data files for the conterminous United States. The ED is a mechanistic ecosystem model built around established submodels of leaf level physiology, organic matter decomposition, hydrology, and functional biodiversity: <http://dx.doi.org/10.3334/ORNLDAAC/1160>.

Lund-Potsdam-Jena Wetland Hydrology and Methane DGV Model (LPJ-WHyMe v1.3.1). This model product provides the FORTRAN 77 source code for the Lund-Potsdam-Jena (LPJ) Wetland Hydrology and Methane Dynamic Global Vegetation Model (LPJ-WHyMe v1.3.1), auxiliary C++ routines, ASCII and NetCDF input data, and NetCDF example output data. LPJ-WHyMe v1.3.1 simulates peatland hydrology, permafrost dynamics, peatland vegetation, and methane emissions: <http://dx.doi.org/10.3334/ORNLDAAC/1150>.



Annual evapotranspiration for peatland grid cells simulated with LPJ-WHy, averaged over 1991-2000 using the CRU TS 2.1 data set. (LPJ-WHyMe v1.3.1)

Additions To Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) Archive

The Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) is an intensive scientific investigation of the tropical rainforest of Brazil and portions of adjacent countries. The project uses intensive remote-sensing techniques and ground-based experiments to investigate the atmosphere-biosphere-hydrosphere dynamics of this large tropical region.

The LBA Project encompasses several scientific themes, or components. Data sets were recently archived for four of these themes.

Three data sets were added to the Carbon Dynamics themes:

- LBA-ECO CD-06 Flux of CO₂ from Amazon Mainstem Rivers, Tributaries, and Floodplains. (<http://dx.doi.org/10.3334/ORNLDAAC/1151>)
- LBA-ECO CD-36 South American Land Data Assimilation System Atmospheric Forcing Data. (<http://dx.doi.org/10.3334/ORNLDAAC/1162>)
- LBA-ECO CD-37 Secondary Forest Biomass and Age Class, Rondonia, Brazil. (<http://dx.doi.org/10.3334/ORNLDAAC/1145>)

Six data sets were added to the Land Use and Land Cover Change themes:

- LBA-ECO LC-07 Methane and Carbon Dioxide Emissions from Balbina Reservoir, Brazil. (<http://dx.doi.org/10.3334/ORNLDAAC/1143>)
- LBA-ECO LC-07 Reflectance Spectra and Water Quality of Amazon Basin Floodplain Lakes. (<http://dx.doi.org/10.3334/ORNLDAAC/1144>)
- LBA-ECO LC-08 Soil, Vegetation, and Land Cover Maps for Brazil and South America. (<http://dx.doi.org/10.3334/ORNLDAAC/1155>)
- LBA-ECO LC-14 Modeled Deforestation Scenarios, Amazon Basin: 2002-2050. (<http://dx.doi.org/10.3334/ORNLDAAC/1153>)
- LBA-ECO LC-14 Modeled Soil and Plant Water Balance, Amazon Basin, 1995-2001. (<http://dx.doi.org/10.3334/ORNLDAAC/1147>)
- LBA-ECO LC-21 Brazilian Amazon Fractional Land Cover Images: 1999-2002. (<http://dx.doi.org/10.3334/ORNLDAAC/1152>)

Four data sets were added to the Nutrient Dynamics themes:

- LBA-ECO ND-01 Reflectance and Biophysical Measures, Grass Pastures: Rondonia, Brazil. (<http://dx.doi.org/10.3334/ORNLDAAC/1154>)

- LBA-ECO ND-01 Watershed Deforestation from Landsat TM Series, Rondonia, Brazil: 1999. (<http://dx.doi.org/10.3334/ORNLDAAC/1159>)
- LBA-ECO ND-02 Landsat Imagery, Para, Brazil: 1984, 1994, and 1999. (<http://dx.doi.org/10.3334/ORNLDAAC/1156>)
- LBA-ECO ND-08 Biomass, Nutrients, and Decomposition in Eucalyptus and Primary Forests. (<http://dx.doi.org/10.3334/ORNLDAAC/1148>)

One data set added to the Physical Climate themes:

- LBA-HMET PC-06 ECMWF Modeled Precipitation and Surface Flux, Rondonia, Brazil: 1999. (<http://dx.doi.org/10.3334/ORNLDAAC/1141>)

Image from LBA-ECO CD-36 South American Land Data Assimilation System Atmospheric Forcing Data

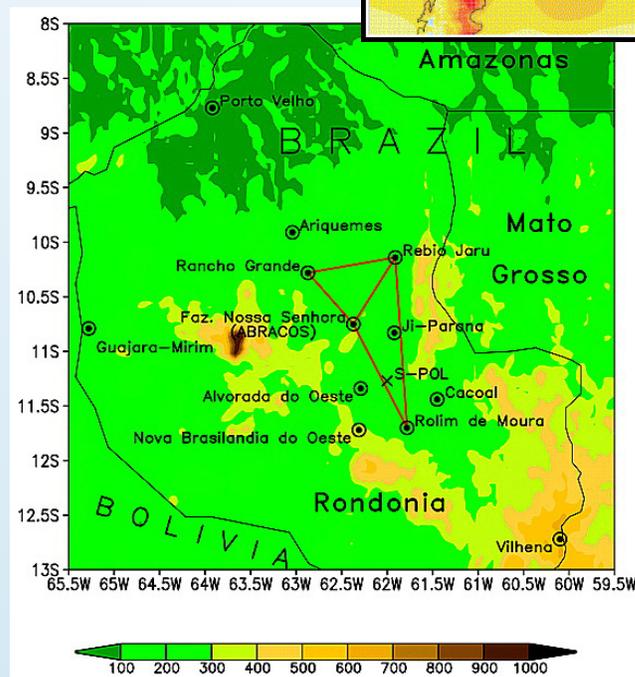
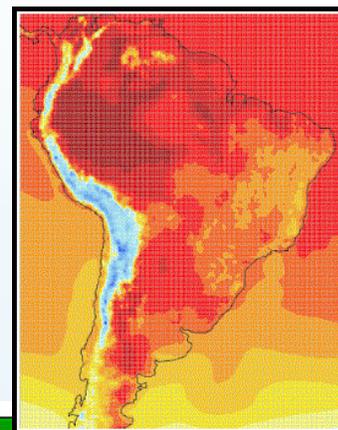


Image from LBA-HMET PC-06 ECMWF Modeled Precipitation and Surface Flux, Rondonia, Brazil: 1999



3 New North American Carbon Program (NACP) Data Sets

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 changes in carbon stocks needed to meet societal concerns and to provide tools for decision makers. Successful execution of the NACP will require an unprecedented level of coordination among observational, experimental, and modeling efforts regarding terrestrial, oceanic, atmospheric, and human components. NACP will rely upon a rich and diverse array of existing observational networks, monitoring sites, and experimental field studies in North America and its adjacent oceans.

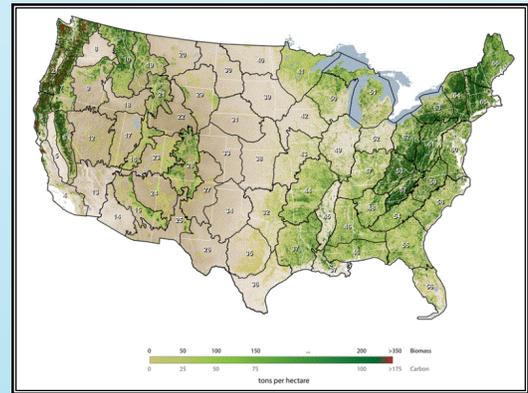
NACP Investigators have organized several interim synthesis activities to evaluate and intercompare models and observations at local and regional scales for the period 2000 - 2005. The regional synthesis used this approach to examine the magnitude, spatial distribution, and interannual variability of carbon sources and sinks across North America.

Three data sets were added to our NACP Archive recently:

NACP Regional: Gridded 1-deg Observation Data and Biosphere and Inverse Model Outputs. This data set contains standardized gridded observation data, terrestrial biosphere model output data, and inverse model simulations of carbon flux parameters that were used in the North American Carbon Program (NACP) Regional Synthesis activities. (<http://dx.doi.org/10.3334/ORNLDAAC/1157>)

NACP Regional: Supplemental Gridded Observations, Biosphere and Inverse Model Outputs. This data set contains standardized gridded observation data, terrestrial biospheric model output, and inverse model simulations that were compiled but not used in the North American Carbon Program (NACP) Regional Synthesis activities, thus the supplemental designation. (<http://dx.doi.org/10.3334/ORNLDAAC/1158>)

NACP Aboveground Biomass and Carbon Baseline Data, V.2 (NBCD 2000), U.S.A., 2000. The NBCD 2000 (National Biomass and Carbon data set for the Year 2000) data set provides a high-resolution (30 m) map of year-2000 baseline estimates of basal area-weighted canopy height, above-ground, live, dry biomass, and standing carbon stock for the conterminous United States. (<http://dx.doi.org/10.3334/ORNLDAAC/1161>)



A mosaic image of biomass at 240-m resolution for the whole conterminous United States.

Upcoming MODIS workshop at ESA

Workshop # 8910: "NASA MODIS Remote-Sensing Data Acquisition and Analysis Tools for Ecology Research",
Saturday, August 3, 2013, 12:00 p.m. - 5:00 p.m.

The ORNL DAAC is pleased to announce that it will be co-presenting a workshop with the Land Processes Distributed Active Archive (LPDAAC) at the 98th Annual Meeting of the Ecological Society of American, <http://eco.confex.com/eco/2013/webprogrampreliminary/Session8910.html>.

This workshop will provide participants with training on National Aeronautics and Space Administration's (NASA's) MODIS (MODERate resolution Imaging Spectroradiometer) data products and tools. Ecologists will learn how to find, access, manipulate, subset, and download MODIS data without special knowledge or software experience; as well as how to obtain and work with HDF-EOS data formats. MODIS views the Earth's surface collecting data in 36 spectral bands. Land

products generated from MODIS include land surface temperature, reflectance, vegetation indices, phenology, land cover, albedo, and photosynthesis. This workshop will cover a data discovery tool developed by NASA's Oak Ridge National Laboratory (ORNL) DAAC for Biogeochemical Dynamics, and feature its MODIS Land Products Subsetting and Visualization Tool that produces subsets of MODIS time series data. This toolset includes data for selected field sites, a global tool, and a Web Service. The Land Processes DAAC (LPDAAC) will step ecologists from beginner to advanced through the USGS visualization tools EarthExplorer (EE) and GloVis; HDF-EOS data collection with Data Pool and Reverb; and reprojection using MRTWeb. Additionally an overview of working with HDF-EOS data will be provided.



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2013 NASA Customer Satisfaction Survey



Thanks to everyone who participated in the 2012 survey. Your comments are much appreciated and a critical component in planning future improvements!

During early September 2013, ORNL DAAC users will receive an email invitation from the CFI Group on be-half of NASA to participate in the next 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, we ask that you please participate!

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

Additional Information

ORNL DAAC Home page:

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

Advanced data search:

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

FTP data access:

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

ORNL DAAC Tools:

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

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

The ORNL DAAC is one of the data centers within the Earth Observing System Data and Information System (EOSDIS).

National Aeronautics and Space Administration:

<http://www.nasa.gov>