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WINTER 2010

ORNL DAAC News

Global Vegetation Data Set Released

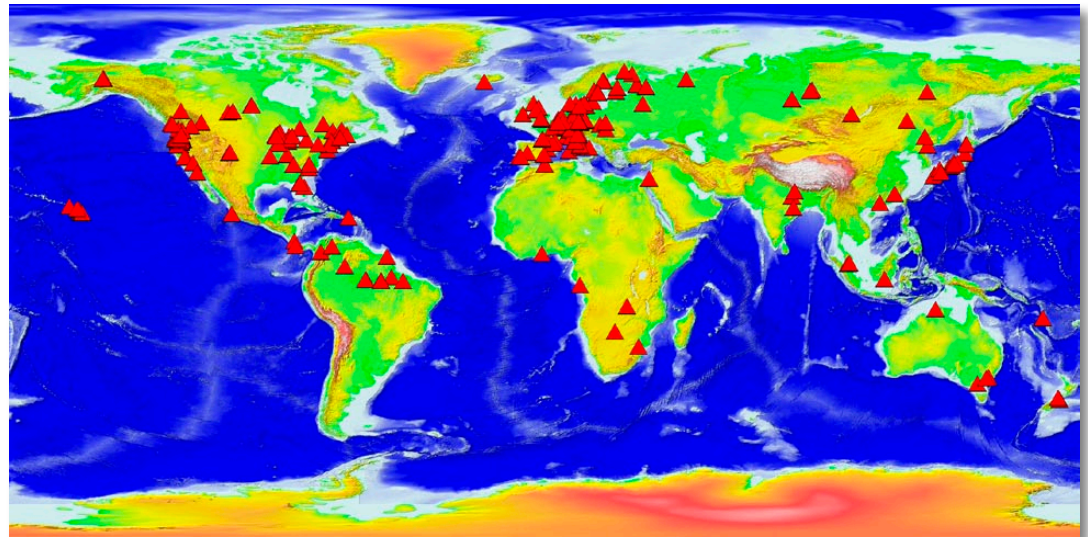
The ORNL Distributed Active Archive Center (DAAC) is a NASA-sponsored source for biogeochemical and ecological data and services useful in environmental research. The ORNL DAAC currently archives and distributes more than 850 products categorized as Field Campaign, Land Validation, Regional and Global, 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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The data set *Global Forest Ecosystem Structure and Function Data for Carbon Balance Research* provides a comprehensive database of forest ecosystem carbon budget variables (fluxes and stocks), ecosystem traits (standing biomass, leaf area index, age), and ancillary information (management regime, climate, soil characteristics) compiled for 528 sites world wide.



Geographic distribution of the 528 sites contained in the database.

The database facilitates the quantification of CO₂ fluxes and pathways across different levels of integration (from photosynthesis to net ecosystem production) in forest ecosystems, and fills an important gap for model calibration, model evaluation, and hypothesis testing at global and regional scales. Data originated from peer-reviewed literature and personal communications with researchers involved in FLUXNET, a “network of regional networks,” which coordinates regional and global analysis of observations from micro-meteorological tower sites.

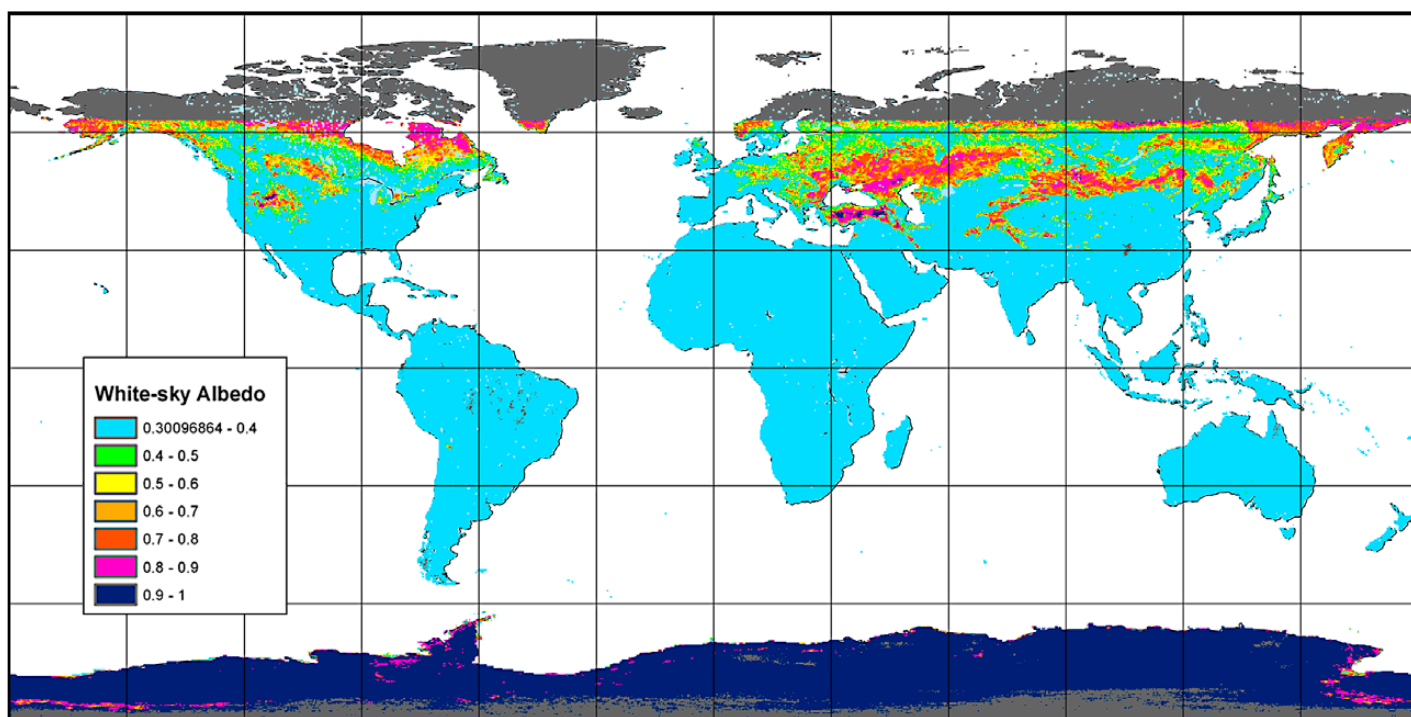
The data set includes: a Microsoft Office Access database (Version 2003); data files for all tables in the database in *.csv format; and query outputs from the database in *.csv format. This data set was prepared by Sebastiaan Luyssaert, Ilaria Iglima, and Martin King, with contributions from hundreds of international colleagues.

Ten ISLSCP II Data Sets Released

The ORNL DAAC recently released 10 data sets associated with the International Satellite Land-Surface Climatology Project (ISLSCP). The ISLSCP Initiative II data collection is designed to support modeling studies of the global carbon, water, and energy cycle. The 10 data sets released are in the vegetation category and include data on vegetation, albedo, and land cover maps. The ISLSCP II data collection was compiled under the guidance of Forrest Hall and colleagues at NASA's Goddard Space Flight Center.

Two data sets contain vegetation data: ISLSCP II C4 Vegetation Percentage, prepared by C.J. Still, J.A. Berry, G.J. Collatz, and R.S. DeFries; and ISLSCP II Continuous Fields of Vegetation Cover, 1992-1993, prepared by R. S. DeFries and M.C. Hansen.

One data set provides 50% and 95% root ecosystem depths, ISLSCP II Ecosystem Rooting Depths, prepared by H.J. Schenk and R.B. Jackson; and the last provides land cover data: ISLSCP II IGBP Discover and SIB Land Cover, 1992-1993, prepared by T. Loveland, J. Brown, D. Ohlen, B. Reed, Z. Zhu, L. Yang, and S. Howard.



ISLSCP II MODIS Collection 4 white-sky albedo band 3 2002.

Six of the data sets contain albedo data including: ISLSCP II AVHRR Albedo and BRDF, 1995, prepared by A. Strahler, C.L.B. Schaaf, and E. Tsvetsinskaya; ISLSCP II Earth Radiation Budget Experiment (ERBD) Monthly Albedo, 1986-1990, prepared by B.R. Barkstrom; ISLSCP II MODIS (Collection 4) Albedo, 2002, prepared by A.H. Strahler, C.L.B. Schaaf, and F. Gao; ISLSCP II Monthly Snow-free Albedo, 1982-1993, and Background Soil Reflectance, prepared by D.A. Dazlich and S.O. Los; ISLSCP II NOAA 5-Year Average Monthly Snow-Free Albedo from AVHRR, prepared by I.A. Csiszar; and ISLSCP II Snow-Free, Spatially Complete, 16 Day Albedo, 2002, prepared by E.G. Moody, M.D. King, C.L.B. Schaaf, and F. Gao.

The 50 data sets in the ISLSCP Initiative II collection were acquired from a number of U.S. and international agencies, universities, and institutions, then co-registered to equal-angle grids of one, one-half, and one-quarter degree resolution and reformatted into a common ASCII format. The collection includes a variety of remotely sensed data sets ranging from visible to microwave wavelengths. The data sets include improved topography, surface radiation, near-surface meteorology, precipitation, runoff, soils, and vegetation data sets that can be used in a variety of interdisciplinary research activities. Several data sets to support global carbon and biogeochemical studies are also included. The remaining 40 data sets will be published at the ORNL DAAC in the near future.

Twelve LBA Data Sets Released

The ORNL DAAC recently released 12 data sets associated with the LBA-ECO component of the Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA).

- Four data sets on meteorological data from the Santarem region of Para, Brazil, from the Carbon Dynamics research teams of CD-03 (David Fitzjarrald, Matthew Czikowsky, and colleagues) and CD-04 (S. Miller, M. Goulden, and H. da Rocha).
- Five data sets on trace gas fluxes and forest biophysical measurements collected in the Tapajos National Forest by the Nutrient Dynamics (ND-02) team (E.A. Davidson, C.J.R. de Carvalho, R.O. Figueiredo, and colleagues).
- Three data sets on precipitation in Para, Brazil; and vegetation composition and structure for sites in Para, Brazil, and Yapu, Columbia, collected by the Land Cover and Land Use Change team, LC-09 (Eduardo Brondizio, Emilio Moran, and Mateus Batistella).



Instruments positioned at the top of the flux tower located at km 83, Tapajos.

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.

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1. Enter your search criteria in the data search box or use the advanced search option <http://mercury.ornl.gov/ornldaac/index.jsp?tab=advanced>. For example, enter "soil carbon" and run the search.
2. Click on the RSS icon from the top of the results page and then select subscribe.
3. Each time you reload your RSS reader, it will look for any new data sets that meet your search criteria and display the results in your RSS inbox!

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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.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>



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