



**DAAC**  
for biogeochemical dynamics  
DISTRIBUTED ACTIVE ARCHIVE CENTER Oak Ridge National Laboratory



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 greater than 780 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>.

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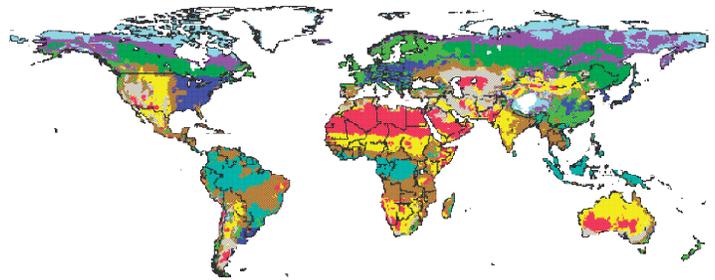
<http://www.nasa.gov>

WINTER 2008

# ORNL DAAC News

## MAPSS Vegetation Distribution Model Available

The ORNL DAAC is pleased to announce the release of a new vegetation distribution model product, **MAPSS (Mapped Atmosphere-Plant-Soil System Model), Version 1.0**. The MAPSS model was developed by the Pacific Northwest Research Station of the USDA Forest Service and has been used extensively by the Intergovernmental Panel on Climate Change (IPCC) in regional and global assessments of climate change impacts on vegetation.



*Example output from MAPSS Model: Current conditions*

The MAPSS model simulates the potential natural vegetation that could exist on any upland site in the world under present, past, or future climate change. It operates on the fundamental principal that ecosystems will tend to maximize the leaf area that can be supported at a site by available soil moisture or energy. The model has been adapted to the landscape scale, providing a single ecosystem simulation paradigm applicable to a full range of scales from landscape (watershed) to global.

To access the MAPSS model, either type "MAPSS" into the "Quick Data Search" box on the ORNL DAAC home page (<http://daac.ornl.gov>) or go to the Biogeochemical Model Archive Page ([http://daac.ornl.gov/model\\_intro.shtml](http://daac.ornl.gov/model_intro.shtml)) and click on the "See List of Models" link.

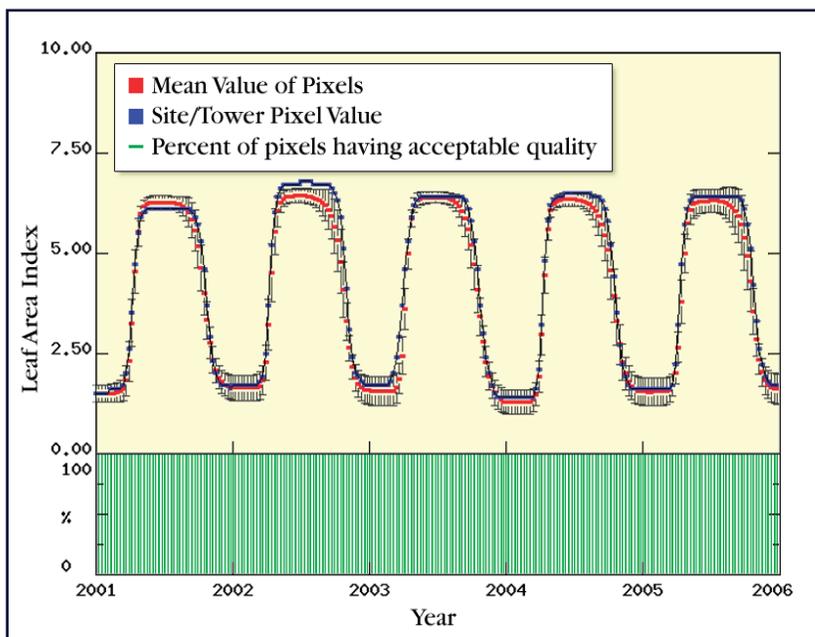
## Survey Results In

A big "Thank You" to all of the ORNL DAAC users who participated in the NASA data center survey this past August. Overall, the ORNL DAAC scored a 75, which compares well against other government systems evaluated using this survey tool, and we received a number of helpful comments. We are evaluating the survey results and your comments and will be making improvements based on this information. Again, thanks to all who participated.



# Gap-Filled and Smoothed LAI/fPAR MODIS Now Available

The gap-filled and smoothed Leaf Area Index and fraction of Photosynthetically Active Radiation (LAI/fPAR) MODIS product is now available through the MODIS North America subsetting tool (<http://daac.ornl.gov/MODIS/modis.html>). This product (MOD15GFS) was created to aid modeling efforts by providing continuous values for these critical parameters. It is also useful for examining trends in canopy leaf phenology. For more about the product and the underlying publications, see <http://accweb.nascom.nasa.gov/index.html>. Using the subsetting tool, users can create subsets up to 200x200 km for any location in North America. The subsets are filtered based on quality criteria as recommended by the science team. The smoothed LAI for the Chestnut Ridge, Tennessee site is shown at right.



Smoothed Leaf Area Index (LAI) from MODIS Collection for Chestnut Ridge, Tennessee, site.

# New Mercury Search Tool

Mercury Advanced Search page, showing the various search parameters.

The ORNL DAAC released a revised search tool designed to improve our users' ability to sort through and find the data products they need. The tool is a new version of Mercury, which is a metadata clearinghouse used to harvest, index, and search metadata. The ORNL DAAC's instance of Mercury enables users to search our metadata, as well as metadata from some related data centers, such as the Long Term Ecological Research (LTER) and the Organization of Biological Field Stations (OBFS). Using Mercury, you can search these data holdings using a simple search (a text search) or advanced search that incorporates fielded parameter search as well as spatial and temporal searches.

Many new features have been added, including:

- combining search results from multiple data sources
- filtering the search results by logical groupings

(continued on p. 3)

## New Mercury Search Tool

(continued)

- dynamic sorting of search results using relevance, period of record, source or project
- enhanced search summary
- direct connections to the shopping cart for ordering data sets held at the ORNL DAAC
- enhanced metadata reports page

A Mercury search can now be saved using a browser's book mark feature, and search results can also be emailed or used as a feed into any RSS reader. You can access Mercury at: [http://mercury.ornl.gov/ornl\\_daac/](http://mercury.ornl.gov/ornl_daac/), you can select the Advanced Product Search from the Search Options menu on the ORNL DAAC home page, or you can use the "Quick Data Search" box on our home page.

We welcome your comments on the new version of Mercury. Feedback for the Mercury Team can be facilitated by emailing [mercury-support@ornl.gov](mailto:mercury-support@ornl.gov).

**Metadata Summary**

Your search found: 95 documents.

Query: fullText:soil type overlaps coordinates (N,W,S,E)=(37.12,-90.74,34.56,-81.22) during 01/01/2000 to 12/32/2004 AND datasource:(daac landval rgd lter obfs)

<b>Filter by data providers</b> <a href="#">LTER Data (73)</a> <a href="#">Regional and Global Data (19)</a> <a href="#">ORNLDAAC Archived Data (2)</a> <a href="#">Land Validation Data (1)</a>	<b>Filter by parameter</b> <a href="#">carbon (9)</a> <a href="#">nitrogen (7)</a> <a href="#">land cover (6)</a> <a href="#">soil moisture/water content (6)</a>	<b>Filter by sensor</b> <a href="#">analysis (15)</a> <a href="#">model analysis (2)</a> <a href="#">modis (2)</a> <a href="#">avhrr (1)</a>	<b>Filter by topic</b> <a href="#">land (19)</a> <a href="#">surface (19)</a> <a href="#">biosphere (14)</a> <a href="#">hydrosphere (10)</a> <a href="#">agriculture (6)</a>	<b>Filter by project</b> <a href="#">global terrestrial observ... (2)</a> <a href="#">model archive (2)</a> <a href="#">center for sustainability... (1)</a> <a href="#">eos land validation... (1)</a>
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Viewing Documents 1 - 10 out of 95  
 Prev 1 2 3 4 5 6 7 8 9 10 Next

Return to Search Show Cart

Sort By: Index Rank Period of record Source Project

**MODIS LAND SURFACE TEMPERATURE AND EMISSIVITY (MOD11A2 AND MYD11A2), ASCII SUBSETS, 7X7-KM, 8-DAY, FEBRUARY 26, 2000 FORWARD** 02/26/2000 - 02/17/2008

Datasource: LAND VALIDATION DATA  
 Project: EOS LAND VALIDATION

The Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC) has prepared subsets of the MODIS Land Surface Temperature and Emissivity (LST/E) (MOD11A2 and MYD11A2) land product for the community to use for validation in conjunction with FLUXNET and other field data. The LST/E MODIS ASCII Subsets include pixel values for a 7 km x 7 km area centered on the flux towers or field sites. Data are available from the ORNL DAAC's FTP area at [ftp://daac.ornl.gov/data/modis\_ascii\_subsets].

The MODIS LST/E products provide per-pixel temperature and emissivity values. Temperatures ...

★★★★★★★★★ View full metadata

**GLOBAL MODEL REFERENCE DATA COLLECTION, 0.5 X 0.5 DEGREE GRID-CELL** 01/31/2000 - 12/31/2000

Datasource: REGIONAL AND GLOBAL DATA  
 Project: NASA EARTH SCIENCE INFORMATION PARTNERS PROGRAM (NASA/ESIP)

The Global Model Reference Data Collection contains 3 data sets that have been used extensively in various biogeochemical process models, in addition to some basic data layers used in analyzing and aggregating model estimates.

Model simulations of ecosystem processes require information about the landscape in addition to model-specific parameters based on vegetation characteristics and soil properties. The data included in the Global Model Reference Data Collection are basic data layers, as follows:

Geography Data Set -- The Geography Data Set contains variables for continent code and grid-...

★★★★★★★★★ View full metadata

**ISRIC-WISE GLOBAL SOIL PROFILE DATA SET (VERSION 1.1)** 01/01/1950 - 01/31/2002

Datasource: REGIONAL AND GLOBAL DATA  
 Project: N/A

The ISRIC-WISE Global Soil Profile Data Set (Version 1.1) is a homogenized primary soil data set holding 4382 geo-referenced soil profiles originating from 123 countries. All profiles are classified in the original Legend (1974) and Revised Legend (1988) of FAO-Unesco. The data set further includes information on site data, soil chemical and physical data on 21,677 horizons, the source of data, and the methods used for determining analytical data. The digital data set is in Access format.

The objective of the ISRIC-WISE Version 1.1 data set is to provide a homogenized set of primary soil data...

★★★★★★★★★ View full metadata

*New results page, showing the relevance ranking, filter controls, and buttons to use the search in an RSS feed, bookmark the search, or e-mail the search results.*

## EDG to WIST Transition

As NASA continues to improve the Earth Observing Systems Data and Information Systems (EOSDIS) infrastructure, all of the EOS Data Gateway (EDG) clients will be decommissioned and users will need to transition to the Warehouse Inventory Search Tool (WIST), which is part of the EOS ClearingHouse (ECHO) system.

What does this mean for ORNL DAAC users? If you are an EDG user, then you will need to transition over to using WIST after March 2008.

As part of the migration, users will be able to access a self-service tool to convert their EDG profile over to WIST and verify their contact information.

If you have any questions about this transition, contact the User Services Office by e-mail at [uso@daac.ornl.gov](mailto:uso@daac.ornl.gov) or through the "Contact Us" link at the bottom of the ORNL DAAC home page.

## Citing DAAC Data

To acknowledge the scientists who have provided products, we request that you include a bibliographic citation to all ORNL DAAC products that you use in your publications. Such citations will help others find the products and see how they have been used.

Refer to the data set documentation for suggested forms of citation, or refer to our on-line guidance: [http://daac.ornl.gov/citation\\_style.html](http://daac.ornl.gov/citation_style.html).

ORNL DAAC also requests that users send us a reprint or the reference citation of any publication that was supported by data received from the ORNL DAAC.

If you have published data that you wish to archive and make available to the scientific community, please contact User Services. A list of guidelines for submitting data in electronic format is available on the Internet: [http://daac.ornl.gov/PI/pi\\_info.html](http://daac.ornl.gov/PI/pi_info.html).

### 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/>

Search all EOSDIS Data:  
<http://wist.echo.nasa.gov>

User Services Office: [ornldaac@ornl.gov](mailto:ornldaac@ornl.gov)

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

National Aeronautics and Space Administration:  
<http://www.nasa.gov>



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