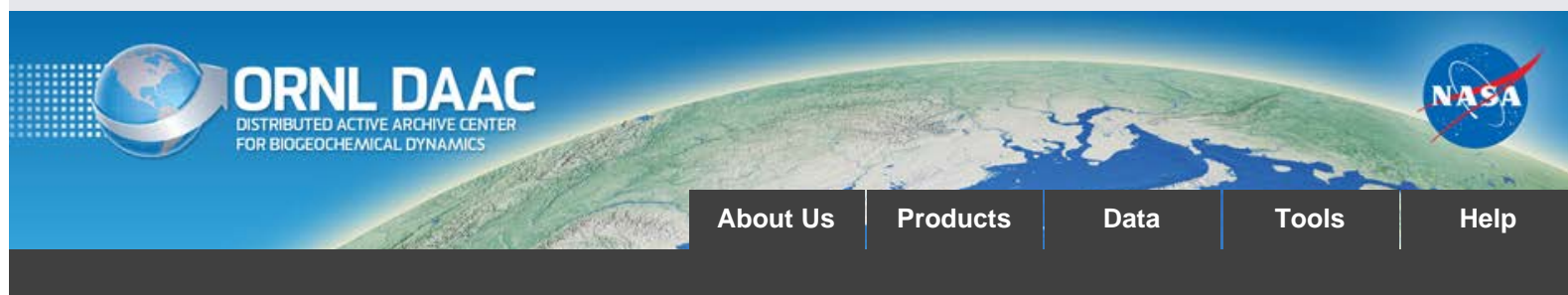


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ISLSCP II C4 Vegetation Percentage

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Revision date: June 9, 2015

Summary:

The photosynthetic composition (C3 or C4) of vegetation on the land surface is essential for accurate simulations of biosphere-atmosphere exchanges of carbon, water, and energy. C3 and C4 plants have different responses to light, temperature, CO₂, and nitrogen; they also differ in physiological functions like stomatal conductance and isotope fractionation. A fine-scale distribution of these plant types is essential for earth science modeling.

This data set contains one data file in ESRI ArcInfo Grid ASCII format: c4_percent_1d.asc. The file provides the percentage of vegetation (0-100) in each 1 degree grid cell (lat./long.) which possess the C4 photosynthetic pathway. The C4 percentage is determined from data sets that describe the continuous distribution of plant growth forms (i.e., the percent of a grid cell covered by herbaceous or woody vegetation), climate classifications, the fraction of a grid cell covered in croplands, and national crop type harvest area statistics. The staff from the International Satellite Land Surface Climatology Project (ISLSCP) Initiative II have made the original data set consistent with the ISLSCP II land/water mask.

Additional Documentation:

This data set is one of the products of the **International Satellite Land-Surface Climatology Project, Initiative II (ISLSCP II)** data collection which contains 50 global time series data sets for the ten-year period 1986 to 1995. A complete description of the data, their derivation, acknowledgements, and references provided by the ISLSCP II Data Management Staff is included with this data set as a companion file named [1_c4_percent_doc.pdf](#).

ISLSCP II is a consistent collection of data sets that were compiled from existing data sources and algorithms, and were designed to satisfy the needs of modelers and investigators of the global carbon, water and energy cycle. The data were acquired from a number of U.S. and international agencies, universities, and institutions. The data and documentation have undergone two peer reviews.

ISLSCP is one of several projects of Global Energy and Water Cycle Experiment (GEWEX) [<http://www.gewex.org/>] and has the lead role in addressing land-atmosphere interactions -- process modeling, data retrieval algorithms, field experiment design and execution, and the development of global data sets.

Data Citation:

Cite this data set as follows:

Still, C.J., J.A. Berry, G.J. Collatz, and R.S. DeFries. 2009. ISLSCP II C4 Vegetation Percentage. In Hall, Forrest G., G. Collatz, B. Meeson, S. Los, E. Brown de Colstoun, and D. Landis (eds.). ISLSCP Initiative II Collection. Data set. Available on-line [<http://daac.ornl.gov/>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, USA. <http://dx.doi.org/10.3334/ORNLDAAC/932>

File Information:

The archived data sets for ISLSCP II have been organized by categories. This data set is in the vegetation category--a collection of vegetation and albedo data sets.

Data Set Spatial Extent: Global gridded

Westernmost Longitude: -180 W

Easternmost Longitude: 180 E

Northernmost Latitude: 90N

Southernmost Latitude: -90S

Projection: Geographic

Data Set Spatial Resolution: 1 degree in both latitude and longitude**Data Set Temporal Extent:** February through July in 1995**Data Set Temporal Resolution:** Synoptic months February and July in 1995**Data File Format:**

All of the data files in each data set within the ISLSCP Initiative II data collection are in ASCII grid format. All files are gridded to a common equal-angle lat/long grid. This data file is grouped by spatial resolution and has 6 header metadata rows.

1-degree metadata: ncols360, nrows180, xllcorner-180, yllcorner-90 ,cellsize 1, NODATA_value -99

The data file in this data set is named "**c4_percent_1d.asc**".

Data Values:

All values are written as floating point values.

Missing values are assigned the value of -99 on all data layers.

Missing values over land are assigned the value of -88

Data file naming conventions are described in the [0_c4_percent_readme.txt](#) file

Data Access:

These data are available through the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC) [<http://daac.ornl.gov>].

Data Archive Contact Information:

E-mail: uso@daac.ornl.gov

Telephone: +1 (865) 241-3952



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