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The logo for ORNL DAAC, featuring the text "ORNL DAAC" in a large, bold, blue font. The "O" and "R" are white with blue outlines, while "NL DAAC" is solid blue. The background of the logo shows a landscape with green trees and a blue sky.

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ISLSCP II Land and Water Masks with Ancillary Data

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Revision date: December 9, 2013

Summary:

This data set contains the ISLSCP II fixed land/water masks and percentages of land or water in each cell. There are seven data files: four produced from a 1-km land/water mask compiled at the Jet Propulsion Laboratory (JPL) in support of NASA's Earth Observing System; two files of a land outline overlay created from the land/water mask files created at NASA's Goddard Space Flight Center; and one file which is a latitude grid coordinate file and longitude grid coordinate file produced by the ISLSCP II staff. All of these data are provided at three spatial resolutions of .25, 0.5 and 1-degree in latitude and longitude and on a common Earth grid.

There are seven compressed (.zip) files with this data set.

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, its derivation, acknowledgements, and references provided by the ISLSCP II Data Management Staff is included with this data set as a companion file named [1_land_water_masks_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:

Jet Propulsion Laboratory. 2013. ISLSCP II Land and Water Masks with Ancillary Data. 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/1200>

File Information:

The archived data sets for ISLSCP II have been organized by categories. This data set is in the ancillary data category.

Data Set Spatial Extent: Global

Westernmost Longitude: -180 W

Easternmost Longitude: 180 E

Northernmost Latitude: 90 N

Southernmost Latitude: -90 S

Projection: Geographic

Data Set Spatial Resolution: one, half, and quarter degree in both latitude and longitude

Data Set Temporal Extent: time invariant

Data File Format

All of the data files in each data set within the ISLSCP Initiative II data collection are in ESRI ASCII grid format for ArcInfo. The file format consists of numerical fields of varying length, which are delimited by a single space and arranged in columns and rows.

There are seven zip data files in this data set with a spatial resolution of 1-degree, 0.5-degree, and 0.25-degree respectively. When expanded, these files contain data files in .asc format. The files are in three areas: (1) Land/Water and Land/Sea masks, (2) Land Outline Overlay, and (3) Latitude & longitude Grid Coordinate Data. A companion file is also provided for each .zip file with the file naming conventions of the .asc files.

(1) Land/Water and Land/Sea Masks with four zip files:

- inland_water_masks_xdeg.zip (companion file: [0_inland_water_masks_xdeg_readme.txt](#))
- land_ocean_masks_xdeg.zip (companion file: [0_land_ocean_masks_xdeg_readme.txt](#))
- land_water_masks_xdeg.zip (companion file: [0_land_water_masks_xdeg_readme.txt](#))
- land_water_masks-99_xdeg.zip (companion file: [0_land_water_masks-99_xdeg_readme.txt](#))

The original 1-km mask was produced at JPL from the Digital Chart of the World and the World Vector Shoreline data bases. These data were aggregated from their original 1-km spatial resolution to 1 degree (1d), 0.5 degree (hd), and .25 degree (qd). Through the aggregation process the percentages of water and/or land in the coarser cell were also calculated. The binary land/water masks (0=Water; 1=Land) were produced from cells containing 50% or greater amounts of water. There is an additional "binary" land/water product, created from the original maps to help process other data sets. It was decided to include this because it was useful. This product has -99 for water and -88 for land, at all three resolutions.

(2) Land Outline Overlay with two zip files:

- land_only_outlines_xdeg.zip (companion file: [0_land_water_outlines_readme.txt](#))
- land_water_outlines_xdeg.zip (companion file: [0_land_water_outlines_readme.txt](#))

These ISLSCP II land outline overlays were created at NASA's Goddard Space Flight Center. The Land/Water Mask files were processed to create files containing a simple outline that overlays the coastlines (the edge of the landmass is marked). The binary land outline overlay is 1 for the border and 0 for everything else.

(3) Latitude & Longitude Grid Coordinate Data with one zip file:

- lat_lon_grid_coords_xdeg.zip (companion file: [0_lat_lon_grid_coord_readme.txt](#))

This file contains the ISLSCP II Latitude grid coordinate files and Longitude grid coordinate files for every grid cell. These are global, coarse resolution files containing the center coordinates (lat & lon) for each grid cell. The files were produced by the ISLSCP II staff.

Please refer to [1_land_water_masks_doc.pdf](#) for data file naming conventions.

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

