

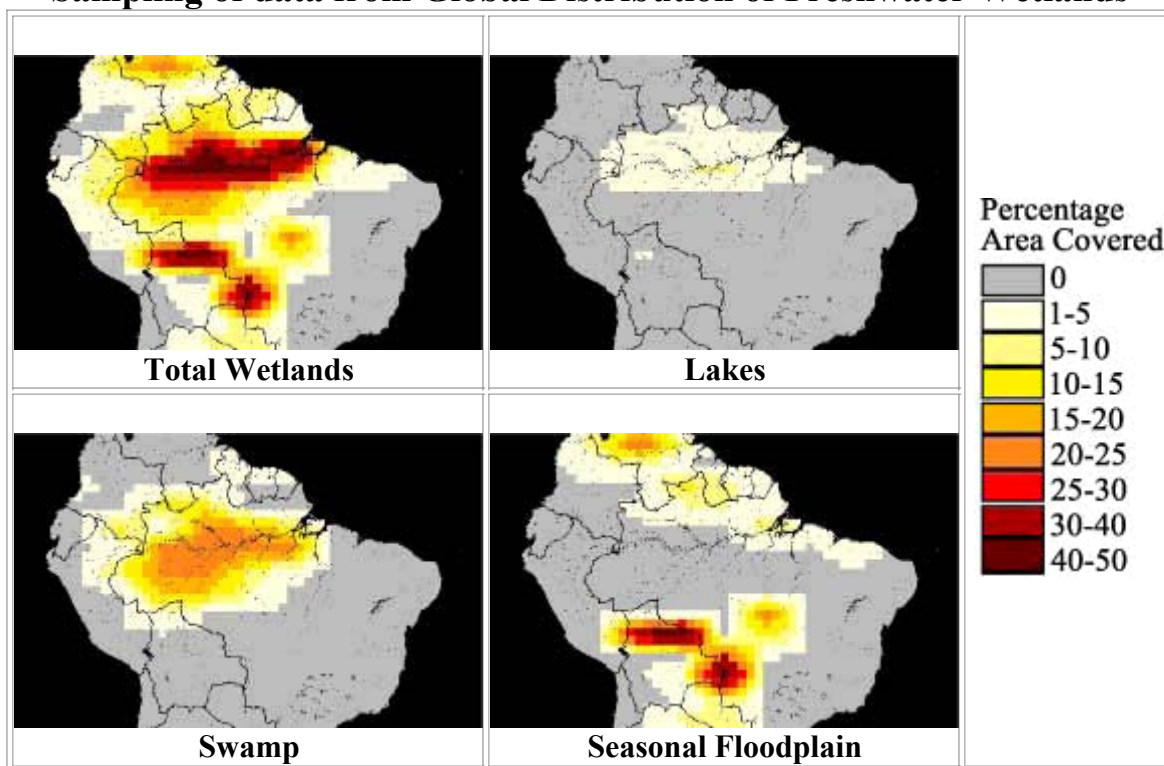
LBA Regional Freshwater Wetlands, 1-Degree (Stillwell-Soller et al.)

Description

The data set consists of an LBA study area subset of the Global Distribution of Freshwater Wetlands data base 1 degree data.

The Global Distribution of Freshwater Wetlands data base has been assembled from two data sets: Aselman and Crutzen's (AC) (1989) wetlands data set and Klinger's (pers. comm., 1995) Political Alaska data set. The aim is to provide an accurate, comprehensive and uniform set of files for convenient specification of wetlands in global climate models. The main source of data is AC global maps of percent cover for a variety of wetlands categories at 2.5-deg latitude by 5-deg longitude resolution. There is some reorganization for seasonally varying categories. Using bilinear interpolation, the AC data was interpolated to a standard 1-deg by 1-deg grid. The AC data set is geographically complete except for the Alaska region. At the time the data set was assembled, AC found that there was no appropriate large-scale data for the Alaska region, therefore they had to make crude estimates based on limited and conflicting published sources. To remedy this Klinger's Alaska data for bogs and fens at 1-deg by 1-deg resolution were added to cover this region.

Sampling of data from Global Distribution of Freshwater Wetlands



This README file contains information regarding:

1. Data format
2. Procedure used to create the Amazon subset
3. Legend and data source

DATA FORMAT

The downloadable file, wetlands.tar.gz, is a UNIX compressed tar file. Once the file is untarred there are 51 separate files (listed below in alphabetical order). The first part of each filename indicates the wetland category. Filenames containing the string $\text{\textcircled{E}}\text{-ack}^1$ contain merged data from both Aselman & Crutzen and Klinger data sets. Otherwise the files bogs.1x1 and fens.1x1 contain only the Aselman & Crutzen data. For more information please refer to the original documentation (URL given in the $\text{\textcircled{E}}\text{Legend}$ and data source¹ section of the README file). All data values represent percentage area covered by the wetland category.

Total Natural Wetlands:

- total.1x1

Bog

- bogs.1x1
- bogs_ack.1x1

Fen

- fens.1x1
- fens_ack.1x1

Swamp

- swamps.1x1

Marsh

- marsh.1x1

Swamp/marsh

- swamp-marsh.1x1

Seasonal Swamp/marsh

- swpjan.1x1
- swpfeb.1x1
- swpmar.1x1
- swpapr.1x1
- swpmay.1x1
- swpjun.1x1
- swpjul.1x1
- swpaug.1x1
- swpsep.1x1
- swpoct.1x1
- swpnov.1x1
- swpdec.1x1

Swamp/marsh where seasonality could not be determined

- swmiss.1x1

Lakes

- lakes.1x1

Permanent Floodplain

- pfloodplain.1x1

Seasonal Floodplain

- sfloodplain.1x1
- fldjan.1x1
- fldfeb.1x1
- fldmar.1x1
- fldapr.1x1
- fldmay.1x1
- fldjun.1x1
- fldjul.1x1
- fldaug.1x1
- fldsep.1x1
- fldoct.1x1
- fldnov.1x1
- flddec.1x1

Rice Paddies

- ricepd.1x1
- jan-ricepd.1x1
- feb-ricepd.1x1
- mar-ricepd.1x1
- apr-ricepd.1x1
- may-ricepd.1x1
- jun-ricepd.1x1
- jul-ricepd.1x1
- aug-ricepd.1x1
- sep-ricepd.1x1
- oct-ricepd.1x1
- nov-ricepd.1x1
- dec-ricepd.1x1

All floodplains, discounting seasonality

- fld.1x1

Floodplains where seasonality could not be determined

- flmiss.1x1

* All values are zero for the subset but, files are included for sake of completeness.

It is highly recommended that you review the original documentation for this data set for more specifics. There is some documentation on-line at <http://www.scd.ucar.edu/isg/lana/wetlands/>. The complete, original documentation is an NCAR Technical Note (NCAR/TN-416+STR).

The data files are in ASCII GRID format for ArcInfo. Each file contains a single ASCII array with integer values. Coordinates listed below are in decimal degrees.

Rows 35
Columns 55
UpLeftX -85
UpLeftY 10
LoRightX -30
LoRightY -25
cellsize 1
Projection geographic

The ASCII file consists of header information containing a set of keywords, followed by cell values in row-major order. The file format is

```
<NCOLS xxx>  
<NROWS xxx>  
<XLLCORNER xxx>  
<YLLCORNER xxx>  
<CELLSIZE xxx>  
{NODATA_VALUE xxx}  
row 1  
row 2  
.  
.  
.  
row n
```

where xxx is a number, and the keyword NODATA_VALUE is optional and defaults to -9999. Row 1 of the data is at the top of the grid, row 2 is just under row 1 and so on. The end of each row of data from the grid is terminated with a carriage return in the file.

Although 9999 is listed as the nodata value it does not actually appear in the data.

To import this file into ArcInfo use the following command at an ARC prompt:

```
ASCIIGRID <in_ascii_file> <out_grid> {INT | FLOAT}
```

Arguments

<in_ascii_file> - the ASCII file to be converted.
<out_grid> - the name of the grid to be created.
{INT | FLOAT} - the data type of the output grid.
INT - an integer grid will be created.

FLOAT - a floating-point grid will be created.

PROCEDURE USED TO CREATE THE AMAZON SUBSET

The original data were obtained and read following the directions in the original documentation. The data were converted to ASCII arrays and then imported into ArcInfo using the ASCIIGRID command.

Using GRID (a raster- or cell-based geoprocessing toolbox that is integrated with ArcInfo) the SETWINDOW command was used to define the subarea of interest. This subarea was defined by identifying the bounding coordinates as follows:

```
x_min -85 y_min -25 x_max -30 y_max 10
```

The "snap_grid" option of the SETWINDOW command was used. This snaps the lower-left corner of the specified window to the lower-left corner of the nearest cell in the snap_grid and snaps the upper-right corner of the specified window to the upper-right corner of the nearest cell in the snap_grid. In this case the snap_grid is the original data grid. The purpose of this is to ensure the proper registration of the newly set analysis window. The command format used is as follows:

```
SETWINDOW x_min y_min x_max y_max original_grid
```

Once the window was set, creating the new grid was simply a matter of setting the new subset grid equal to the original grid.

```
subset_grid = original_grid
```

An ASCII array was created from the new subset grid using the GRID command GRIDASCII.

```
file.dat = GRIDASCII(subset_grid)
```

LEGEND & ADDITIONAL SOURCES OF INFORMATION

All data values represent percentage area covered by the wetland category.

1. apr-ricepd.1x1 --> April rice paddies
2. aug-ricepd.1x1 --> August rice paddies
3. bogs.1x1* --> Bog (Aselman & Crutzen data only)
4. bogs_ack.1x1* --> Bog (merged Aselman & Crutzen and Klinger data)
5. dec-ricepd.1x1 --> December rice paddies
6. feb-ricepd.1x1 --> February rice paddies
7. fens.1x1* --> Fen (Aselman & Crutzen data only)
8. fens_ack.1x1* --> Fen (merged Aselman & Crutzen and Klinger data)
9. fld.1x1 --> all floodplains, discounting seasonality
10. fldapr.1x1 --> April seasonal floodplain
11. fldaug.1x1 --> August seasonal floodplain
12. flddec.1x1 --> December seasonal floodplain

13. fldfeb.1x1 --> February seasonal floodplain
14. fldjan.1x1 --> January seasonal floodplain
15. fldjul.1x1 --> July seasonal floodplain
16. fldjun.1x1 --> June seasonal floodplain
17. fldmar.1x1 --> March seasonal floodplain
18. fldmay.1x1 --> May seasonal floodplain
19. fldnov.1x1 --> November seasonal floodplain
20. fldoct.1x1 --> October seasonal floodplain
21. fldsep.1x1 --> September seasonal floodplain
22. flmiss.1x1 --> floodplains, seasonality could not be determined
23. jan-ricepd.1x1 --> January rice paddies
24. jul-ricepd.1x1 --> July rice paddies
25. jun-ricepd.1x1 --> June rice paddies
26. lakes.1x1 --> Lakes
27. mar-ricepd.1x1 --> March rice paddies
28. marsh.1x1 -->* Marsh
29. may-ricepd.1x1 --> May rice paddies
30. nov-ricepd.1x1 --> November rice paddies
31. oct-ricepd.1x1 --> October rice paddies
32. pfloodplain.1x1* --> Permanent floodplain
33. ricepd.1x1 --> Rice paddies
34. sep-ricepd.1x1 --> September rice paddies
35. sfloodplain.1x1 --> Seasonal floodplain
36. swamp-marsh.1x1 --> Seasonal swamp/marsh
37. swamps.1x1 --> Swamp
38. swmiss.1x1 --> swamps/marshes, seasonality could not be determined
39. swapr.1x1 --> April seasonal swamp/marsh
40. swpaug.1x1 --> August seasonal swamp/marsh
41. swpdec.1x1 --> December seasonal swamp/marsh
42. swpfeb.1x1 --> February seasonal swamp/marsh
43. swpjan.1x1 --> January seasonal swamp/marsh
44. swpjul.1x1 --> July seasonal swamp/marsh
45. swpjun.1x1 --> Jun seasonal swamp/marsh
46. swpmar.1x1 --> March seasonal swamp/marsh
47. swpmay.1x1 --> May seasonal swamp/marsh
48. swpnov.1x1* --> November seasonal swamp/marsh
49. swpoct.1x1* --> October seasonal swamp/marsh
50. swpsep.1x1 --> September seasonal swamp/marsh
51. total.1x1 --> Total natural wetlands

The original data and documentation may be found at the following URL:
<http://www.scd.ucar.edu/isg/lana/wetlands/>