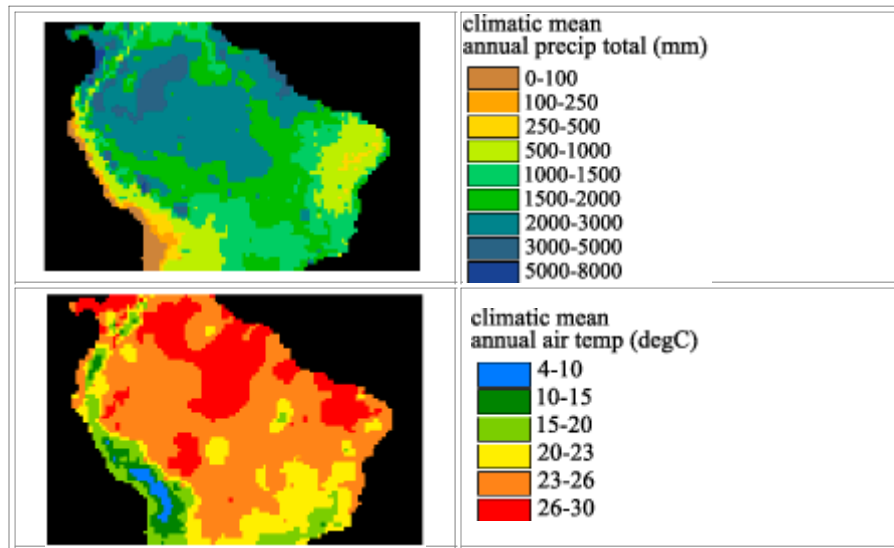


LBA Regional Climate Data, 0.5-Degree Grid, 1960-1990 (Willmott and Webber)

Description:

This data set is a LBA study area subset of Cort J. Willmott and Scott R. Weber's 0.5 degree temperature and precipitation data for South America.

LBA Subset of Willmott & Webber's So. American Climate dat



The data consists of:

Monthly mean air temperature time series (1960-1990) degC:

1. monthly mean air temperatures for 1960-1990
2. cross validation errors associated with time series
3. monthly mean air temperatures for 1960-1990, DEM assisted interpolation
4. cross validation errors associated w/ DEM assisted interpolation time series

Monthly mean air temperature climatology degC:

1. climatic means of monthly & annual air temperatures
2. cross validation errors associated with climatic means
3. climatic means of monthly & annual mean air temps, DEM assisted interpolation
4. cross validation errors assoc w/ DEM assisted interpolation climatic means

Monthly total precipitation time series (1960-1990) mm:

1. monthly precipitation totals for 1960-1990
2. cross validation errors associated with time series
3. monthly precip totals for 1960-1990, climatologically-aided interpolation
4. cross val errors assoc w/ climatologically-aided interpolation time series

Monthly total precipitation climatology mm:

1. climatic means of monthly & annual precipitation totals
2. cross validation errors associated with climatic means

The original documentation and data may be on the "Willmott and Collaborators' Global Climate Resource Pages" at the University of Delaware (<http://climate.geog.udel.edu/~climate/>). Follow the links from "Available climate data" to South American Climate data.

The data files are in ASCII GRID format for ArcInfo.

This README file contains information regarding:

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

DATA FORMAT

When the gzipped tar files are uncompressed there will be the following files.

Tempseries: 1 file for each month of every year (1960-1990) with the following naming convention where ³mmyy² corresponds to month and year. Units are degC.

1. air_temp.trad.ts.tar.gz --> Tmmyy.trad.ts
2. air_temp.trad.cve.ts.tar.gz --> Tmmyy.trad.cve.ts
3. air_temp.dai.ts.tar.gz --> Tmmyy.dai.ts
4. air_temp.dai.cve.ts.tar.gz --> Tmmyy.dai.cve.ts

Precipseries: 1 file for each month of every year (1960-1990) with the following naming convention where ³mmyy² corresponds to month and year. Units are mm.

1. precip.trad.ts.tar.gz --> Pmmyy.trad.ts
2. precip.trad.cve.ts.tar.gz --> Pmmyy.trad.cve.ts
3. precip.dai.ts.tar.gz --> Pmmyy.cai.ts
4. precip.dai.cve.ts.tar.gz --> Pmmyy.cai.cve.ts

Tempclim: 1 file for each month plus 1 file for the annual mean with the following naming convention where "xx" is either the month or "yr" indicating the annual mean. Units are degC

1. air_temp.clim.tar.gz --> Txx.clim
2. air_temp.cve.clim.tar.gz --> Txx.cve.clim
3. air_temp.dai.clim.tar.gz --> Txx.dai.clim
4. air_temp.dai.cve.clim.tar.gz --> Txx.dai.cve.clim

Precipclim: 1 file for each month plus 1 file for the annual mean with the following naming convention where "xx" is either the month or "yr" indicating the annual mean. Units are mm.

1. precip.clim.tar.gz --> Pxx.clim
2. precip.cve.clim.tar.gz --> Pxx.cve.clim

It is highly recommended that you review the original documentation for this data set for more specifics. The original documentation may be found on the "Willmott and Collaborators' Global Climate Resource Pages" at the University of Delaware(<http://climate.geog.udel.edu/~climate/>). Follow the links from "Available climate data" to South American Climate data.

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

Rows 70
Columns 110
UpLeftX -85
UpLeftY 10
LoRightX -30
LoRightY -25
cellsize 0.5
Projection geographic
Nodata value 9999.

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.

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 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 = GRIDASCII(subset_grid)
```

LEGEND & ADDITIONAL SOURCES OF INFORMATION

Temperatures have units of degC

Precipitation totals have units of mm

The original documentation and data files may be found on the "Willmott and Collaborators' Global Climate Resource Pages" at the University of Delaware(<http://climate.geog.udel.edu/~climate/>). Follow the links from "Available climate data" to South American Climate data.