

LBA Regional Monthly Climatology for the 20th Century (New et al.)

Description:

This data set consists of a subset of the Climate Research Unit (CRU) 0.5 Degree 1901-1995 Monthly Climate Time-Series. The subset is for the LBA study area which is defined, for subsetting purposes, as the area within the box defined by the following coordinates: 5N to 35S, 5E to 60E.

The variables in this data set are for monthly surface climate and consist of the following:

Precipitation (mm)
Wet day frequency (days)
Mean temperature (degC * 10)
Diurnal temperature range (degC * 10)
Vapour pressure (hPa * 10)
Cloud cover (oktas * 10)

Primary variables are interpolated directly from station time-series: precipitation, mean temperature, and diurnal temperature range. Secondary variables are interpolated from station series where data are available and estimated using relationships with primary variables in regions with no data: wet-day frequency, vapour pressure, and cloud cover.

There is one file per year per variable as described below in ASCII GRID format for ArcInfo. Each file contains a single ASCII array with integer values.

DATA FORMAT

Format - ASCII GRID format (for ArcInfo)

The first 5 rows include the header information and NODATA values are set to -9999.

Projection - Data is not projected/Geographic (lat/long)

Number of Columns - 110

Number of Rows - 70

Cellsize - .5

Each variable directory (pre, rd0, tmp...) contains a directory for each year represented by the data (1901d, 1902d...). Each of these directories contains 12 zipped files representing months of the year (numbered 1-12). Use gzip to uncompress the files. Use the ASCIIGRID command in ArcInfo or GRID to import the grids.

ARC: ASCIIGRID <in_ascii_file> <out_grid> {INT | FLOAT}

GRID: <out_grid> = ASCIIGRID (<in_ascii_file>, {INT | FLOAT})

PROCEDURE USED TO CREATE THE AMAZON SUBSET

CRU05 1901-1996 0.5o Latitude/Longitude Monthly Climate Data, 23 August 1998

LBA Ecology subset

minimum longitude -85W maximum longitude -30W

minimum latitude -25S maximum latitude 10N

Variables	Directory	Units
Precipitation	pre	mm
Wet day frequency	rd0	days
Mean temperature	tmp	degC*10
Diurnal temperature range	dtr	degC*10
Vapour pressure	vap	hPa*10
Cloud cover	cld	oktas*10

The original data was subsetted and reformatted into monthly grids clipped to the LBA Ecology region using perl script and Arc Macro Language (AML) programming. Specifically, perl script was used to reformat the header information to the ASCII GRID file format and to parse the yearly data into monthly grids. AML was used to read the data into ArcInfo, to FLIP the grids, to CLIP the global data to the LBA_ECOLOGY region, and to export the grids to ASCII GRID format.