

CRC For Greenhouse Accounting Climate Animation Viewer

V. 1.0

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1. INTRODUCTION

This climate viewer displays animations derived from monthly historical precipitation and temperature surfaces for the Australian continent. The original data on which these animations are based are taken from the CRC for Greenhouse Accounting monthly climate database, covering the period 1900-2004. For more information about this database please read the accompanying report.

Note that the animations DO NOT read from the original database (which is approximately 3 Gb of data per climate variable!), but are based on images re-sampled to a much lower resolution.

2. HARDWARE REQUIREMENTS:

The sampler runs on any windows-based PC (95, 2000, XP) with at least 50Mb of free RAM.

3. INSTALLATION:

The sampler can be run directly from CD, or to increase performance the files can be copied from CD into a directory. The only constraint is that all four files must be co-located within the same directory to run. The four files are:

ClimateViewer.exe:	The program
Precipitation.bin:	The precipitation database
Temperature.bin:	The temperature database
Readme.rtf:	This file

4. OPERATION

4.1 MENUS

The 'file' menu allows the selection of either the precipitation or the temperature database for viewing.

The 'help' menu displays this 'readme' file, and an 'about' box;

4.2 ANIMATION CONTROL

Select the type of climate surface for viewing, and the time period.

Select the 'start year' and the 'end year' to define the time period to be viewed.

There are four options for selecting different temporal resolutions of the data.

The 'Display month-to-month variation' option shows the highest resolution, with the map updating every month over the timecourse of the animation.

The 'Display year-to-year variation' option animates from year to year. For precipitation it represents the annual total, and for temperature it is the average over the 12 months for that year.

The 'Display 12 x long-term monthly averages' option animates from January to December, with maps representing the average of each month over the period 1900-2004.

The 'Display 1 x long-term yearly average' option displays the single long-term average annual map.

Once the selections are made, pressing the VIEW button starts the animation. Pressing the STEP button allows stepping through the animation one year or month at a time (pressing RUN again resumes the animation). Changes to the animation display (see below) can be made while the animation is progressing.

The ABORT button quits a current animation, and the CLOSE button exits the program.

4.3 ANIMATION DISPLAY

These options control the display properties of the animation.

The DELAY RATE controls the speed of the animation. Slide the bar to the right to slow down the animation.

The MERGE FACTOR controls the rate at which sequential images merge into one another. Selecting some degree of image merging makes the animations appear more 'natural'.

Change the display colours of the continental map with the COLOUR PALETTE. The colours can be reversed with the INVERT PALETTE option.

VIEW AS ANOMOLIES allows the month-by-month and year-by-year animations to be displayed as deviations from the long-term average values. This is useful for

seeing what months/years tended to be 'warmer' or 'cooler' or 'wetter' or 'drier' than the average conditions over the period 1900-2004.

5. CONTACT DETAILS

Suggestions and comments can be sent to:

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