GeoCLIM Installation Manual

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FEWS NET

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The GeoCLIM Manual is intended to be a reference guide for all users of the climatological analysis tool, be they climatologists, decision makers, researchers, etc. the USGS/FEWS NET and the CHG are dedicated to providing tools to help mitigate or prevent humanitarian crises.

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Introduction

Summary

The GeoCLIM is part of a set of agroclimatic analysis products developed by FEWS NET (see overview of FEWS NET). The GeoCLIM is a spatial analysis tool designed for climatological analysis of historical rainfall and temperature data. The GeoCLIM provides an array of accessible analysis tools for climate-smart agricultural development. These user friendly tools can be used to obtain and analyze climate data, blend station data with satellite data to create more accurate datasets, analyze seasonal trends and/or historical climate data, analyze drought for a selected region by calculating Standardized Precipitation Index (SPI), create visual representations of climate data, create scripts (batch files) to quickly and efficiently analyze similar "batches" of climate data, view and/or edit shapefiles and raster files, and extract statistics from raster datasets to create time series. (video- GeoCLIM overview)

Installation and Settings

System Requirements

- Microsoft Windows Operating System (XP or later)

Summary

New versions of the GeoCLIM are released periodically as bugs are discovered and repaired or when performance improvements are implemented. This section describes the process of downloading and installing the GeoCLIM, selecting the geographic area of work, importing data into the GeoCLIM and selecting a workspace. For video tutorials, exercises and more, please visit the CHG website at chg.geog.ucsb.edu/tools/geoclim. Once the software is installed, a detail explanation of the different functions of the GeoCLIM could be found in the **help/view GeoCLIM Manual** pull down menu. The GeoCLIM version 1.1.2 installs the .NET Framework automatically.

Step 1: Download and Install the GeoCLIM

All users:

Please download the latest version of the GeoCLIM from:

http://chg.ucsb.edu/tools/geoclim/ or http://earlywarning.usgs.gov/fews/software-tools/20

Existing users:

- Before installing the new version, Change the workspace directory to keep all your existing data, see step 4 below.
- Uninstall the present version of the GeoCLIM.
- Make sure to delete or rename the GeoCLIM directory on the c:/users/[uers]/docuents/GeoCLIM.
- Install the new version
- Set the path to match that of the existing GeoCLIM workspace directory

Note: all the datasets that were downloaded on the previous version will be available on the 1.1.2 in the new workspace settings.

First time users:

- Select the latest GeoCLIM download from chg.geog.ucsb.edu/tools/geoclim.
- Right click on the file and click 'Open', or double click on the file and follow the instructions for default installation.
- Run the program by going to the Start Menu and selecting the program there, or double clicking on the desktop icon.
- Select the directory where you want to locate the GeoCLIM workspace directory.

Note: It is recommended to locate the GeoCLIM workspace directory outside of the C: drive to avoid running out of memory.

Step 2: Select Geographic Area and Region

The GeoCLIM works on selected geographic regions. These regions are provided as part of the program and the users also have the option to create their own, see help in the GeoCLIM for more information on creating a new region.

Once the program opens:

- Choose a geographic area from the 'Select a Geographic Area' menu and a region or specific country from the 'Select Region' menu.

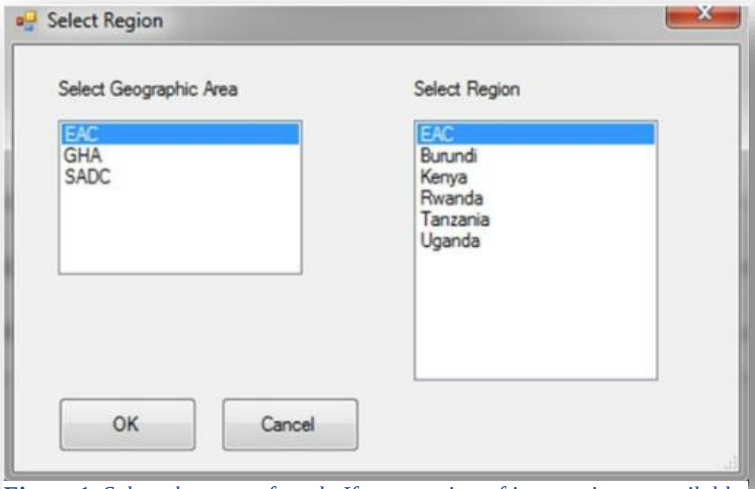


Figure 1. *Select the area of work. If your region of interest is not available, select one and add your region later.*

NOTE: *If the region of interest is not available, simply select one of the available regions and add a new one later on.*

- Once the desired options are selected in the appropriate fields, click 'OK'.

Step 3: Download or Import Data

After closing the area selection window, the **GeoCLIM has No Data** dialogue box will appear. Here, the user can choose to:

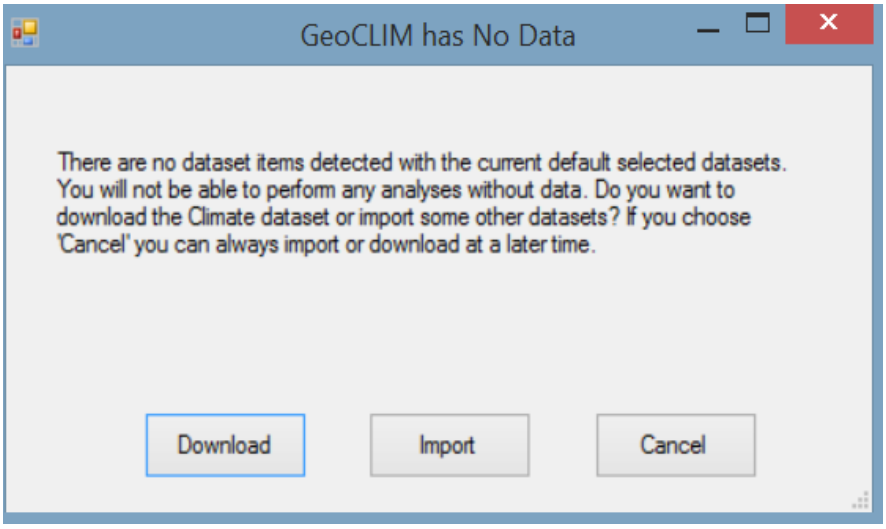


Figure 2*. Making data available in the GeoCLIM. Download data for Global, Africa, or Central America. Import existing archives. Or click cancel to bring data later.*

a) Import existing archives (files created with an entire dataset - see **NOTE** below) into GeoCLIM by clicking **Import**,
b) Download preexisting GeoCLIM data by clicking 'Download' or
c) Click 'Cancel' to load data later on.

To import an existing archive that is already on user's system:

a) Click 'Import'.
b) Navigate to the directory where the archive is located and select the archive.

NOTE: *To obtain ready-to-install archives of CHIRPS, go to* chg.geog.ucsb.edu/tools/geoclim

To download data directly to the GeoCLIM, click 'Download' and follow these steps:

a) The download window only allows the selection of default datasets that have ftp information. On the *Download selection* window, select a period range for 'From' and 'To', see Figure 3.

b) The data Parameters will fill out automatically, based on the dataset selected.

When all the desired options are chosen, click 'OK' to download the specified data.

NOTE: *There are only three pre-defined Data Extent or regions: Global, Africa and Central America.*

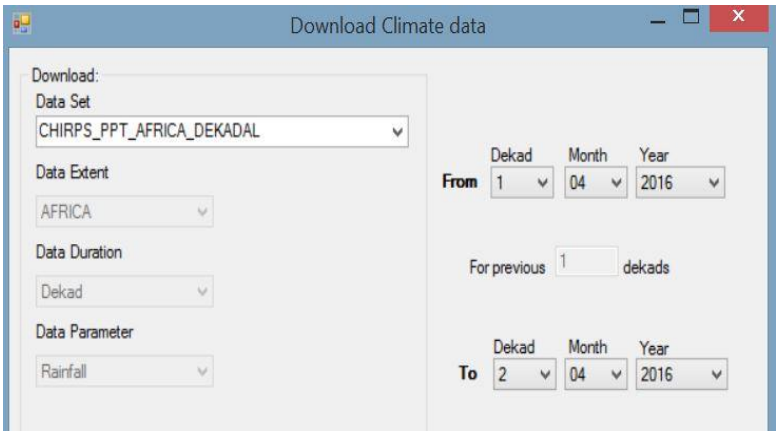


Figure 3*. Select the dataset and period of time to be downloaded. FTP information has to be defined on the dataset settings.*

The 'GeoCLIM Processing Console' window will show the files downloading. When the word 'Done' appears on the lower left of the console, click 'Close'. Note that the downloading process may take a while depending on computer or internet speed.

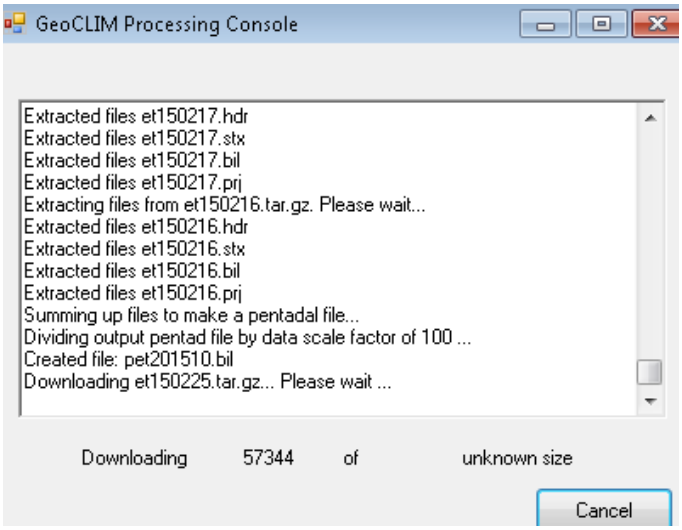


Figure 4 *The GeoCLIM processing Console shows the data that are being downloaded.*

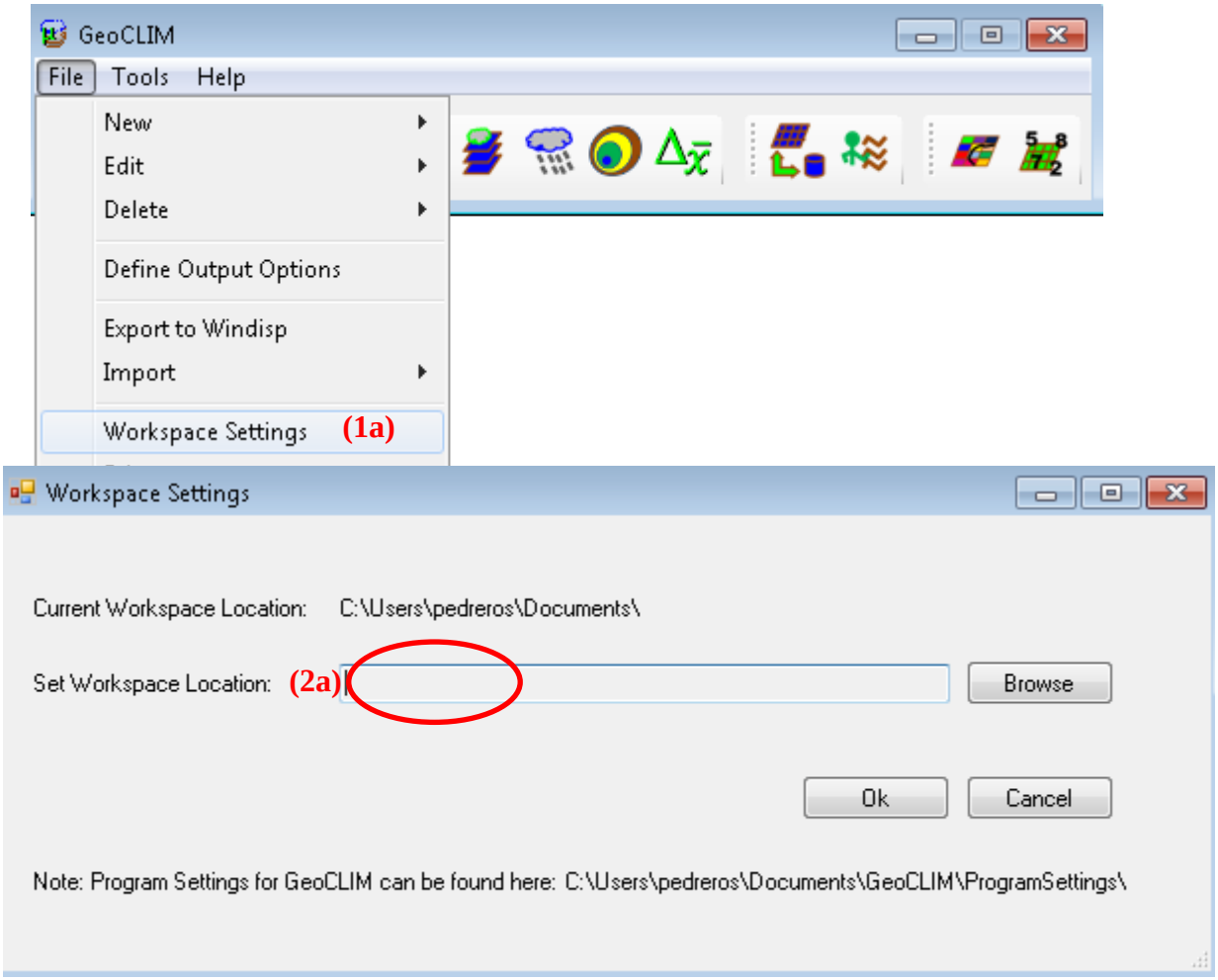
Step 4: Change workspace

The default workspace is installed on the C: drive. Sometimes the C: drive is too small to hold all the data and products from the GeoCLIM so it is necessary to change the workspace. Also, the benefit if having the workspace on a different path is that in case a new version of the GeoCLIM

is installed the workspace is not replaced. If the workspace is left as default the directory is replaced and all the data would be deleted.

To define a new workspace:

- Got to File > Workspace Settings (see **(1a)** below).
- Change the path in the 'Set Workspace Location' field (see **(2a)** below).



Step 5: Download exercise directory

Practice exercises and video tutorials for the different application of the GeoCLIM could be found on the CHG website chg.geog.ucsb.edu/tools/geoclim