

getCRUCLdata: Download and Use CRU CL v. 2.0 Climatology Data in R

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Summary

The CRU CL v. 2.0 data are a gridded climatology of 1961-1990 monthly means released in 2002 and cover all land areas (excluding Antarctica) at 10 arcminutes (0.1666667 degree) resolution (New et al. 2002) providing precipitation, cv of precipitation, wet-days, mean temperature, mean diurnal temperature range, relative humidity, sunshine, ground-frost, windspeed and elevation. While these data have a high resolution and are freely available, the data format can be cumbersome for working with. The getCRUCLdata package provides four functions that automate importing CRU CL v. 2.0 climatology data into R (R Core Team 2016), facilitate the calculation of minimum temperature and maximum temperature, and format the data into a tidy data frame (Wickham 2014) or a list of raster stack objects (Hijmans 2016) for use in R or easily exports to a raster format file for use in a geographic information system (GIS). Two functions, `get_CRU_df` and `get_CRU_stack` provide the ability to easily download CRU CL v. 2.0 data from the CRU website and import the data into R. The other two functions `create_CRU_df` and `create_CRU_stack` allow the user to easily import the CRU data files from a local disk location and transform them into a tidy data frame or raster stack. The data have applications in applied climatology, biogeochemical modelling, hydrology and agricultural meteorology (New et al. 2002).

References

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