ABBREVIATIONS USED IN CCAFS CLIMATE

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DELTA METHOD DOWNSCALING AND DISAGGREGATION

Label	Variable	Scaling Factor	Units
BIO1	Annual Mean Temperature	10	Degrees Celsius
BIO2	Mean Diurnal Range (Mean of monthly (max temp - min temp))	10	Degrees Celsius
BIO3	Isothermality (BIO2/BIO7)	100	Dimensionless
BIO4	Temperature Seasonality (Standard Deviation)	100	Degrees Celsius
BIO5	Max Temperature of Warmest Month	10	Degrees Celsius
BIO6	Min Temperature of Coldest Month	10	Degrees Celsius
BIO7	Temperature Annual Range (BIO5-BIO6)	10	Degrees Celsius
BIO8	Mean Temperature of Wettest Quarter	10	Degrees Celsius
BIO9	Mean Temperature of Driest Quarter	10	Degrees Celsius
BIO10	Mean Temperature of Warmest Quarter	10	Degrees Celsius
BIO11	Mean Temperature of Coldest Quarter	10	Degrees Celsius
BIO12	Annual Precipitation	1	Milimeters
BIO13	Precipitation of Wettest Month	1	Milimeters
BIO14	Precipitation of Driest Month	1	Milimeters
BIO15	Precipitation Seasonality (Coefficient of Variation)	100	Fraction
BIO16	Precipitation of Wettest Quarter	1	Milimeters
BIO17	Precipitation of Driest Quarter	1	Milimeters
BIO18	Precipitation of Warmest Quarter	1	Milimeters
BIO19	Precipitation of Coldest Quarter	1	Milimeters
CONS_MTHS	Maximum Number of Consecutive Dry Months	1	Count
PREC	Average Monthly Precipitation	1	Millimeters
TMAX	Average Monthly Maximum Temperature	10	Degrees Celsius
TMIN	Average Monthly Min Temperature	10	Degrees Celsius
TMEAN	Average Monthly Mean Temperature	10	Degrees Celsius

BIOCLIMATIC VARIABLES

Label	Variable	Scaling Factor	Units
BIO1	Annual Mean Temperature	10	Degrees Celsius
BIO2	Mean Diurnal Range (Mean of monthly (max temp - min temp))	10	Degrees Celsius
BIO3	Isothermality (BIO2/BIO7)	100	Dimensionless
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BIO5	Max Temperature of Warmest Month	10	Degrees Celsius
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BIO7	Temperature Annual Range (BIO5-BIO6)	10	Degrees Celsius
BIO8	Mean Temperature of Wettest Quarter	10	Degrees Celsius
BIO9	Mean Temperature of Driest Quarter	10	Degrees Celsius
BIO10	Mean Temperature of Warmest Quarter	10	Degrees Celsius
BIO11	Mean Temperature of Coldest Quarter	10	Degrees Celsius
BIO12	Annual Precipitation	1	Milimeters
BIO13	Precipitation of Wettest Month	1	Milimeters
BIO14	Precipitation of Driest Month	1	Milimeters
BIO15	Precipitation Seasonality (Coefficient of Variation)	100	Fraction
BIO16	Precipitation of Wettest Quarter	1	Milimeters
BIO17	Precipitation of Driest Quarter	1	Milimeters
BIO18	Precipitation of Warmest Quarter	1	Milimeters
BIO19	Precipitation of Coldest Quarter	1	Milimeters
CONS_MTHS	Maximum Number of Consecutive Dry Months	1	Count

Bioclimatic variables are derived from the monthly temperature and rainfall values in order to generate more biologically meaningful variables. The bioclimatic variables represent annual trends (e.g., mean annual temperature, annual precipitation) seasonality (e.g., annual range in temperature and precipitation) and extreme or limiting environmental factors (e.g., temperature of the coldest and warmest month, and precipitation of the wet and dry quarters). A quarter is a period of three months (1/4 of the year).

PRECIS

LABEL	VARIABLE	SCALING FACTOR	UNITS
BIO1	Annual Mean Temperature	10	Degrees Celsius
BIO10	Mean Temperature of Warmest Quarter	10	Degrees Celsius
BIO11	Mean Temperature of Coldest Quarter	10	Degrees Celsius
BIO12	Annual Precipitation	1	Millimeters
BIO13	Precipitation of Wettest Month	1	Millimeters
BIO14	Precipitation of Driest Month	1	Millimeters
BIO15	Precipitation Seasonality (Coefficient of Variation)	100	Fraction
BIO16	Precipitation of Wettest Quarter	1	Millimeters
BIO17	Precipitation of Driest Quarter	1	Millimeters
BIO18	Precipitation of Warmest Quarter	1	Millimeters
BIO19	Precipitation of Coldest Quarter	1	Millimeters
BIO2	Mean Diurnal Range (Mean of monthly (max temp - min temp))	10	Degrees Celsius
BIO3	Isothermality (BIO2/BIO7)	100	Dimensionless
BIO4	Temperature Seasonality (Standard Deviation)	100	Degrees Celsius
BIO5	Max Temperature of Warmest Month	10	Degrees Celsius
BIO6	Min Temperature of Coldest Month	10	Degrees Celsius
BIO7	Temperature Annual Range (BIO5-BIO6)	10	Degrees Celsius
BIO8	Mean Temperature of Wettest Quarter	10	Degrees Celsius
BIO9	Mean Temperature of Driest Quarter	10	Degrees Celsius
CLOUDAM	Total Cloud Amount ($0 \leq X \leq 1$)	1	Fraction
CONS_MTHS	Maximum Number of Consecutive Dry Months	1	Count
EVCR	Evaporation Rate From Canopy	1	Millimeters
EVPOTF1	Potential Evapotranspiration Factor1	1	Dimensionless
EVPOTF2	Potential Evapotranspiration Factor2	1	Dimensionless
EVPOTR	Potential Evaporation Rate	1	Millimeters
EVSS	Evaporation Rate From Soil Surface	1	Millimeters
PREC	Average Monthly Precipitation	1	Millimeters
PRESS	Pressure At Mean Sea Level	1	Pascal's
RHUM	Relative Humidity At 1.5 Meters	100	Fraction
SHUM	Specific Humidity At 1.5 Meters	1	Fraction
SLHEAT	Surface Latent Heat Flux	1	Watt per square meter
SOILMAF	Soil Moisture Availability Factor	1	Dimensionless
SOILMRZ	Available Soil Moisture Content In Root Zone	1	Kilograms per square meter
SUBSR	Sublimation Rate At Surface	1	Millimeters
TMAX	Average Monthly Maximum Temperature	10	Degrees Celsius
TMEAN	Average Monthly Mean Temperature	10	Degrees Celsius
TMIN	Average Monthly Minimum Temperature	10	Degrees Celsius
TRANSR	Transpiration	1	Millimeters
TSMAX	Surface (Skin) Temperature	10	Degrees Celsius
TSMEAN	Surface (Skin) Temperature	10	Degrees Celsius
TSMIN	Surface (Skin) Temperature	10	Degrees Celsius
WSMEAN	Wind Mean Speed At 10 Meters	1	Meter per second
WSMMAX	Wind Maximum Speed At 10 Meters	1	Meter per second

PATTERN SCALING WITH MARKSIM WEATHER GENERATOR DATA

LABEL	VARIABLE	SCALING FACTOR	UNITS
PREC	Average Monthly Precipitation	1	Millimeters
TMAX	Average Monthly Maximum Temperature	1	Degrees Celsius
TMIN	Average Monthly Min Temperature	1	Degrees Celsius
RAINYDAYS	Number Of Days With Rain In A Month	1	Count
SOLAR_RADIATION	Solar Radiation At Ground	10	MJ m-2 d-1