**Gap-Filled Monthly Precipitation and Temperature Data for Parque Metropolitano (PNM)**

Created by Tori Meakem

*Source Data & Gap-Filling Methods*

Total monthly precipitation (mm) and average monthly temperature (°C) data for Cocoli were collected at the Parque Metropolitano (PNM) crane in Panama City, which was established in 1995 and is located approximately 8 km away from the plot. A description of the crane and instruments can be found at: <http://biogeodb.stri.si.edu/physical_monitoring/research/metpark>

Data gaps were filled using the average values from two local ACP (Autoridad del Canal de Panamá) weather stations: Albrook Airbase (FAA) and Balboa Heights (HTS), located 6.9 and 6.1km NW of PNM, respectively (<http://biogeodb.stri.si.edu/physical_monitoring/research/panamacanalauthority>). Precipitation was estimated using the following equation derived from a regression:

PNM = (FAA and HTS mean)\*0.9911.

More details regarding this equation can be found in the “Monthly summaries\_PNM.xlsx” file on the STRI physical monitoring website.

*Data File Description*

The file **`cocoli\_gap-filled.csv`** contains the following data columns: *Year*, *Month*, *Precipitation* (mm), *Precipitation Source*, *Temperature* (°C), and *Temperature Source*. The Source columns indicate whether the data for each month came from the PNM crane or from the ACP stations.

*Citation*

Studies using these data should cite the following publication, for which this record was created:

Meakem, V, Tepley, AJ, Gonzalez-Akre, EB, Herrmann V,Muller-Landau, HC, Wright, SJ, Hubbell, SP, Condit, R, Anderson-Teixeira, KJ. (2017) Role of tree size in moist tropical forest carbon cycling and water deficit responses. *New Phytologist* (in press).

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