One excel file with both soil characteristics data and plot characteristics data (data on topographical attributes and litter and vegetation characteristics) has been uploaded.

All data was collected in the field from 27 one-hectare sampling plots in Mengsong township, Xishuangbanna prefecture, Yunnan province, China (21˚29’25.62”N, 100˚30’19.85”E). In each sampling plot, we sampled nine circular subplots with a 10-m radius on a square grid with 50-m spacing.

Tab 1: Soil characteristics (data on soil biochemical and physical characteristics for five depth intervals: 0-0.15, 0.15-0.30, 0.30-0.60. 0-60-0.90, 0.90-1.20 m)

Tab 2: Plot characteristics (data on topographical attributes and litter and vegetation characteristics)

General labels for both tabs:

PLOT: refers to the sampling plot number

SUBPLOT: refers to the subplot number within each sampling plot. MS stands for mixed sample, which was a pooled sample of all subplots per sampling plot.

Labels and units Tab 1 (Soil characteristics):

DEPTH: sampling depth interval (m)

CN\_RATIO: soil carbon to nitrogen ratio

C\_PERC: total organic carbon concentration (%)

N\_PERC: total nitrogen concentration (%)

BD\_mean: soil bulk density (g cm-3). The value gives the mean of all subplots per sampling plot.

CSTOCK: soil organic carbon stock (Mg C ha-1)

AKE\_AKE\_mmol\_kg: effective cation exchange capacity (mmolc kg-1 soil)

AKE\_cmol\_clay: effective cation exchange capacity (cmolc kg-1 clay)

Alsaturation: Aluminium saturation (%).

BS: Base saturation (%).

PH\_H2O: soil pH measured in a 1:2.5 soil-to-solution ratio. The solution is distilled water.

PH\_KCL: soil pH measured in a 1:2.5 soil-to- 1 M KCl solution ratio.

SAND: sand (0.063-2 mm) concentration (%).

SILT\_CLAY: the sum of clay (<0.002 mm) and silt (0.002- 0.063 mm) concentration (%).

Labels and units Tab 2 (Plot characteristics):

UTM\_E: UTM coordinate easting (m)

UTM\_N: UTM coordinate northing (m)

LAND\_USE: land-use type, MF= mature forest, RF=regenerating or highly disturbed forest, T=tea plantation, G=grassland.

LITTER\_C: total organic carbon concentration (%) of the litter layer

LITTER\_N: total nitrogen concentration (%) of the litter layer

LITTER\_CSTOCK: litter carbon stock (Mg C ha-1)

TREE\_BA: tree basal area (m2 ha-1)

SLOPE: slope (%)

ELEVATION: elevation (m)

CTI: compound topographic index