**Read me file**

These are the files that contain data used to analyze and to reproduce Dossa et al manuscript if Forest Ecology and Management. These are from an over 3 years wood decomposition experiment across a tropical forest disturbance landscape in Mengsong, SW, China.

These are in total 8 files.

1. Mengsong\_field\_data\_FEM.csv which is the main file and consists of data collected from the two native species logs used in the experiment.
   1. *Tag\_n.x* unique identifier of wood log,
   2. *For\_type* forest type with OC = open canopy (regenerating forest), CC = closed canopy (mature forest) and OL = open land,
   3. *PLOT* experimental plot unit,
   4. *S-PLOT* sub unit embedded within the experimental plot,
   5. *tree\_index* the identifier of individual tree were logs come from. Numbers for Litsea cubeba and letters for Castanopsis mekongensis,
   6. *Species\_full* full latin name of wood species used,
   7. *Species, Species.x* short name of wood species used,
   8. *Pos\_soil* relative position to the soil where wood core was collected from. Up = half core not in direct contact with soil and down = half wood core in direct contact with soil,
   9. *Bark\_thickness\_T1* through T4 bark thickness (mm) measured with electronic caliper two measurements at each end of the log,
   10. *Installment\_date* date when wood log was incubated on the forest floor,
   11. *Thickness\_bark\_fresh1.mm\_later* and *Thickness\_bark\_fresh2.mm\_later* thickness (mm) of fresh bark at the end of the experiment. One measurement taken at each end of log,
   12. *Bark\_Dry\_weight* initial disk dried weight (g),
   13. *Disk\_Fresh\_weight\_g\_ini* initial disk fresh weight (g),
   14. *Disk\_Green\_volume\_ini* initial disk fresh volume (g) measured by water displacement method (Williamson & Wiemann, 2010),
   15. *Disk\_Dry\_weight\_ini* initial disk dried weight (g),
   16. *Disk\_Dry\_volume\_ini* initial disk dried volume (g) measured by water displacement method (Williamson & Wiemann, 2010),
   17. *Water\_cont\_ini.y* intial log water content calculated as (fresh weight-dry weight)/dry weight (Jones et al., 2019),
   18. *WSG\_ini.y* wood specific gravity calculated as (oven dry weight/oven dry volume)\* water density see (Williamson & Wiemann, 2010),
   19. *Bark\_sample\_Fresh.weight.1\_ini* initial disk bark sample fresh weight (g),
   20. *Bark\_sample\_Green\_volume.ini* initial disk bark sample fresh volume(g) measured by water displacement method (Williamson & Wiemann, 2010),
   21. *Bark\_sample\_Dry\_weight.ini* initial disk bark sample dried weight (g),
   22. *Bark\_sample\_Dry\_volume.ini* initial disk bark sample dried volume (g) measured by water displacement method (Williamson & Wiemann, 2010),
   23. *db*, *dm* and *dt* diameter of wood log a bottom (end 1), middle, and top (end 2) respectively (cm),
   24. *L* wood log length (cm),
   25. *Coll\_No.x* collection or harvest sequence. 1 for first harvest at 3 months, and 6 for sixth harvest at 36 months. In between harvest happened at 6 month interval, no harvest was done at 30 months,
   26. *Coll\_date.x* collection or harvest date,
   27. *Number\_days* number of days spanned since wood log incubation (days),
   28. *Fresh\_mass\_later* harvested wood core fresh weight (g),
   29. *Fresh\_volume\_later* harvested wood core fresh volume (g) measured by water displacement method (Williamson & Wiemann, 2010),
   30. *Oven\_dry\_mass.105.for.60h\_later* harvested wood core dried mass (g),
   31. *Oven\_dry\_volume\_later* harvested wood core dried volume (g) measured by water displacement method (Williamson & Wiemann, 2010),
   32. *Water\_cont\_later.y* harvested wood core water content calculated as (fresh weight-dry weight)/dry weight (Jones et al., 2019),
   33. *WSG\_later.y* harvested wood core wood specific gravity calculated as (oven dry weight/oven dry volume)\* water density see (Williamson & Wiemann, 2010),
   34. *Per\_WSG\_loss* percentage of wood specific gravity loss calculated as (wood specific gravity initial- wood specific gravity later)\*100/wood specific gravity initial,
   35. *Log\_volume* wood wood log volume (cm^3) calculated with Netwon formula (Harmon & Sexton, 1996),
   36. *Wood\_density* wood density (g cm-3) calculated as dried weight/fresh volume (Mori et al., 2013),
   37. *Log\_mass\_ini* log initial dried mass (g) calculated knowing wood density and volume,
   38. *Log\_Bark\_Dry\_weight\_g* log remaining bark dried weight (g) at the end of experiment,
   39. *Log\_No\_Bark\_Dry\_weight\_g* log remaining dried weight (g) with bark removed,
   40. *Log\_mass\_final* remaining log dried weight (g) at the end of the experiment, calculated as remaining log dried weight + log remaining bark dried weight at the end of experiment,
   41. *Bark\_sample\_Fresh.weight\_later* sample of remaining bark fresh weight (g) at the end of the experiment,
   42. *Bark\_sample\_Green.volume\_later* sample of remaining bark fresh volume (g) at the end of the experiment measured by water displacement method (Williamson & Wiemann, 2010),
   43. *Bark\_sample\_Dry.weight\_later* sample of remaining bark dried weight (g) at the end of experiment,
   44. *Bark\_sample\_Dry.volume\_later* sample of remaining bark dried volume (g) at the end of experiment measured by water displacement method (Williamson & Wiemann, 2010),
   45. *ML* mass loss (g),
   46. *ML\_percent* percentage mass loss which is calculated as mass loss \* 100/initial mass,
   47. m\_initial log initial dried weight (g),
   48. *m\_harvest* log dried weight (g) at the end of the experiment,
   49. t number of days (days) spanned on forest floor till harvest,
   50. *Termi.assum* log termite status presence (1), absence (0) with assumption that termite stay after first encounter or record in the log during fieldwork,
   51. *PLOT\_SPLOT* combination of PLOT unit with S\_PLOT sub plot unit. This was used later to combine this data file with the environmental data file.
2. Mengsong\_environmental\_factors.csv contains the wood samples chemistry analysis content in percent (%).
3. Preddat.csv represents the new dataframe to be used to predict wood specific gravity loss based on selected best statistical model,
4. Termite\_infestation\_per\_plot.csv compiles the number of logs infested by termites (n\_presence), the number of logs non-infested by termites (n\_absence) per wood species (Species.x), per harvest (Coll\_No.x.x) and per plot (PLOT.x),
5. Environmental factors\_Mengsong.csv which comprises all the soil/topography and vegetation of plots and subplots. Soil/topography data were reduced to the first 2 PCA axes with original analyses in (Paudel et al., 2015). Vegetation data consists of the first 3 NMDS axes with original analyses in (Paudel et al., 2015),
6. Temperature\_landscape\_government station.csv compares the microclimate temperature (recorded with Hobo microclimate station) with the local climate recorded by local government station,
7. Temp\_Landscape\_only.csv consists of microclimate temperature (recorded by Hobo microclimate station) installed in each of the disturbance gradient category,
8. Soil moisture and RH\_Landscape.csv compiles both daily average soil moisture and ambient relative humidity (recorded by Hobo microclimate station) installed in each of the disturbance gradient category,
9. PAR\_median\_plot.csv consists of the photosynthetically active radiation (recorded by Hobo microclimate station) for daily median of readings taken 1 hour either side of the solar noon.

**References cited**

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