**Read me file**

These are the files that contain data used to analyze and to reproduce Dossa et al 2021 in *Soil Biology and Biochemistry https://www.sciencedirect.com/science/article/pii/S0038071721000146*. These are from an over 3 years wood decomposition experiment across a tropical forest disturbance landscape in Mengsong, SW, China.

These files can also be found at [Put link to github] with the r script used to conduct the statistical analyses.

These are in total 7 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)\* (1/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,
2. mengsong\_97closed\_guilds\_r.csv represents Operational taxonomic units (OTUs) table with OUT\_ID as first column and the remaining column the wood dust samples ID and control samples (positive and negative samples) followed by some OTUs taxonomy with guilds, rot type and trophic mode information starting by the column named “taxonomy”
3. Preddat\_18\_36mo.csv represents the new dataframe to be used to predict wood specific gravity loss, saprotroph abundance, brown, soft, and white-rot abundance based on selected best statistical model,
4. Preddatc.csv represents the new dataframe to be used to predict fungal alpha diversity based on selected best statistical model,
5. otu\_Down\_richness\_strict\_map.csv represents a combined file of OTUs, samples information, rot type abundance, saprotroph abundance in each sample.
   1. SampleID consists of unique identifier of the wood dust sample,
   2. Chao1
   3. se.chao1
   4. Shannon
   5. Chao1\_strict\_sqrt
   6. Tree
   7. Forest
   8. Plot
   9. Subplot
   10. Wood\_log\_ID
   11. Time
   12. Species
   13. Position
   14. Tag\_nb
   15. Installment\_date
   16. Water\_cont\_ini
   17. WSG\_ini
   18. Coll\_No
   19. Coll\_date
   20. Water\_cont\_later
   21. WSG\_later
   22. Remarks
   23. W\_density
   24. Per\_WSG\_loss
   25. Termi.assum
   26. From to each represents the abundance of different rot type and trophic modes
6. mengsong\_map\_r\_chem\_SBB.csv represents multiple columns with overlapping columns with previous file named “mengsong\_97closed\_guilds\_r.csv”, “otu\_Down\_richness\_strict\_map.csv”.
7. Forests characteristics.csv file contains information about forest structure (age, canopy openness, and basal area).

**References cited**

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