Name	Counterpart	Title
I Nengah Surati Jaya, Tatang Tiryana	**B05**	Compiling the values of published wood specific gravity for the tree species / genus present in the CRC core plots and B05 inventory plots

Background and methods

Wood specific gravities (WSG) of trees in tropical forest ecosystems vary considerably with species and taxonomic groups. WSG is an important variable in biomass estimation and it is notoriously difficult to determine. The common practice to use gross average WSG values introduces uncertainty into forest biomass estimation.

Objective

To help reducing such uncertainty, this study compiled WSG values of the tree species identified within the B05 sample plots and the EFForTS study areas. The main objective was to contribute improving biomass estimates by using specific WSG values per species or genus or taxonomic group.

Approach

The underlying species lists were collected from secondary forests, jungle rubber, rubber plantation, and permanent plots of PT REKI. WSG value were searched for each species using various references, including the wood density database of ICRAF (World Agroforestry Center), PROSEA (volume 1, 2 and 3) and the Indonesian wood atlas (I to IV).

Results

Of the 861 species on the sample plots and study sites, 855 have been identified either at species level, genus level, or family level. A summary is depicted in Figure 1. For 6 species, an identification was not possible. Figure 2 compares the WSG values as identified for different timber classes. The compiled WSG values varied considerably and the ranges show a clear trend in terms of commercial timber value: the WSG of "major commercial" trees ranges from 0.36 to 0.90 g/cm^3, for the "minor commercial timbers" from 0.33 to 0.98 g/cm^3, and for the "lesser-known species" from 0.21 to1.06 g/cm^3.

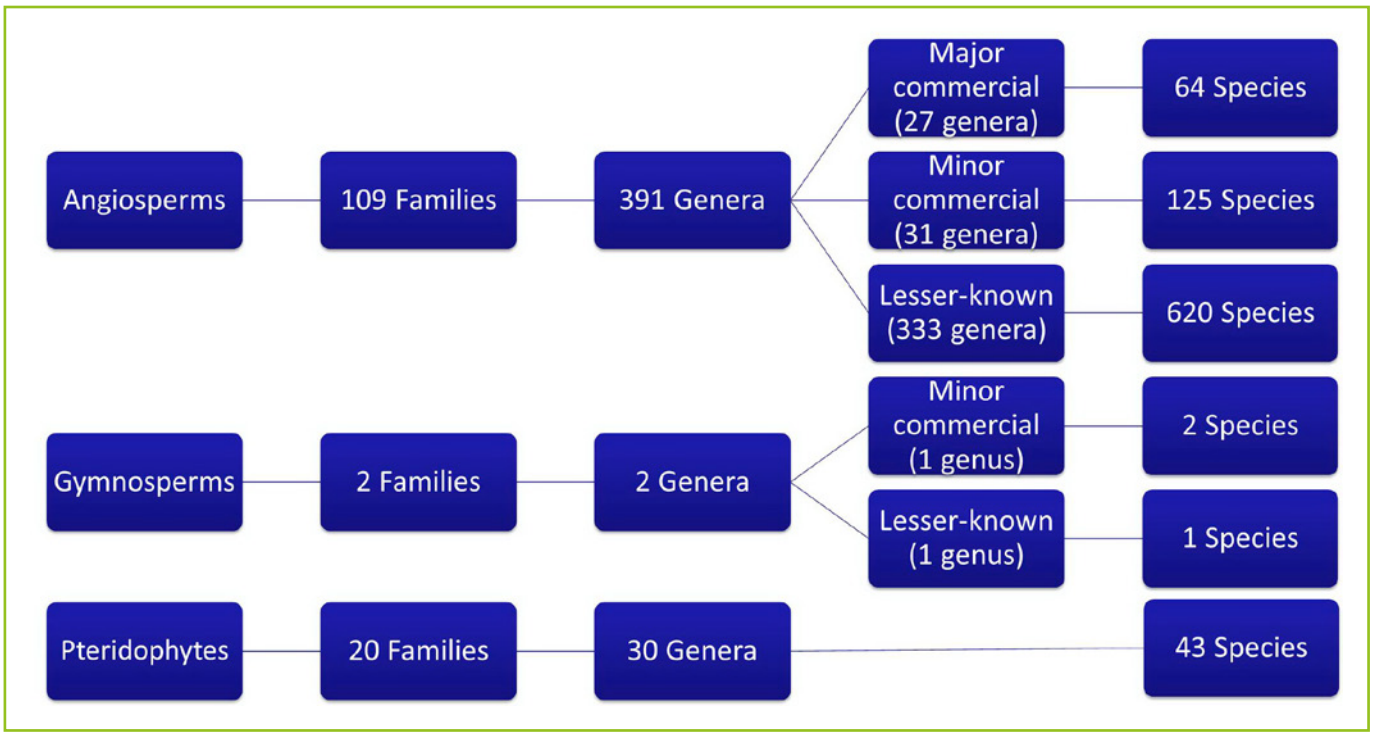

Figure 1. Taxonomic breakdown of the 855 different tree species that were identified on the inventory plots and study sites of CRC990

While it is acknowledged that the WSG does also vary within individual trees and between individual trees of the same species, one may expect that these species (or family or genus) specific WSG values will contribute improving biomass estimates.

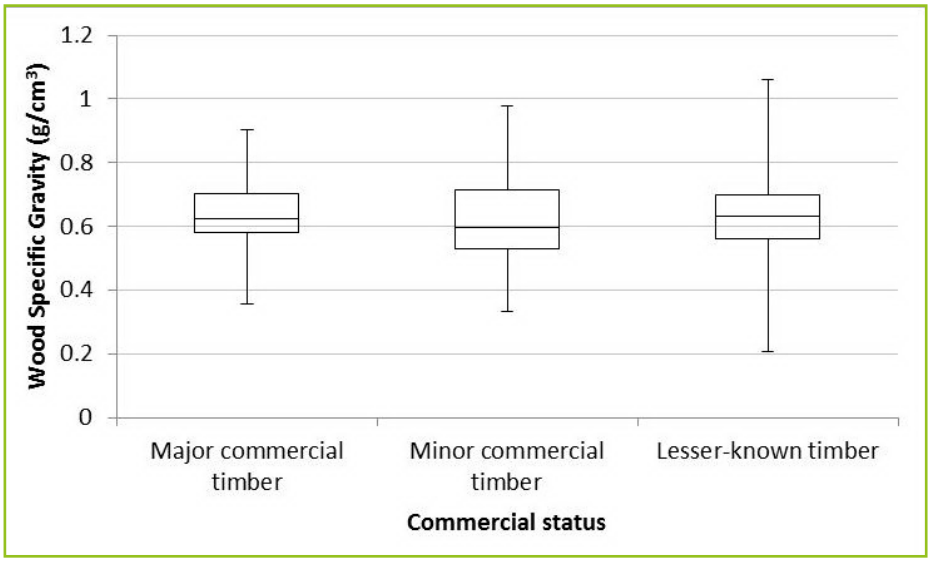

Figure 2. Comparison of WSG values for different timber classes.