Establishing carbon footprint baselines for Robusta coffee production in two key origins: Central Highlands, Vietnam and Southern Sumatra, Indonesia

Deliverable DA3: Definition of comparative scenarios

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Definition of comparative scenarios

The alternative scenarios are based on the most promising behaviour associated with the baseline, that is to say, to bring the whole target areas to the levels of performance exhibited by the best-performing cluster. This best performance is understood as the set of practices that contribute the most to C sequestration without penalising yields, as coffee production is an economic activity relying on bean yields.

To illustrate, if in a country we observed four farm archetypes (i.e. clusters 1, 2, 3 and 4), and after running the C turnover simulation for said clusters it is found that cluster 3 features the best balance between coffee yield and potential to sequester C, the alternative scenario would consist of bringing clusters 1, 2 and 4 to "become" similar to C, by means of adapting practices (e.g. number and type of intercropped plant species, etc).

Figure 1 depicts the relation between total biomass C and yield of each proposed archetype in Indonesia. Archetype 1 features relatively stable (lower) yields combined with a large spread (2 orders of magnitude) in biomass. Archetype 2 is similar to Archetype 1, but featuring a smaller biomass spread. Archetype 3 features both lower yields and biomass C, while Archetype 4 shows a large yield spread (almost 1 order of magnitude) and low biomass spread (lower values). The differences between Archetype 1 and 2 are not so clear before assessing their potential C turnover.

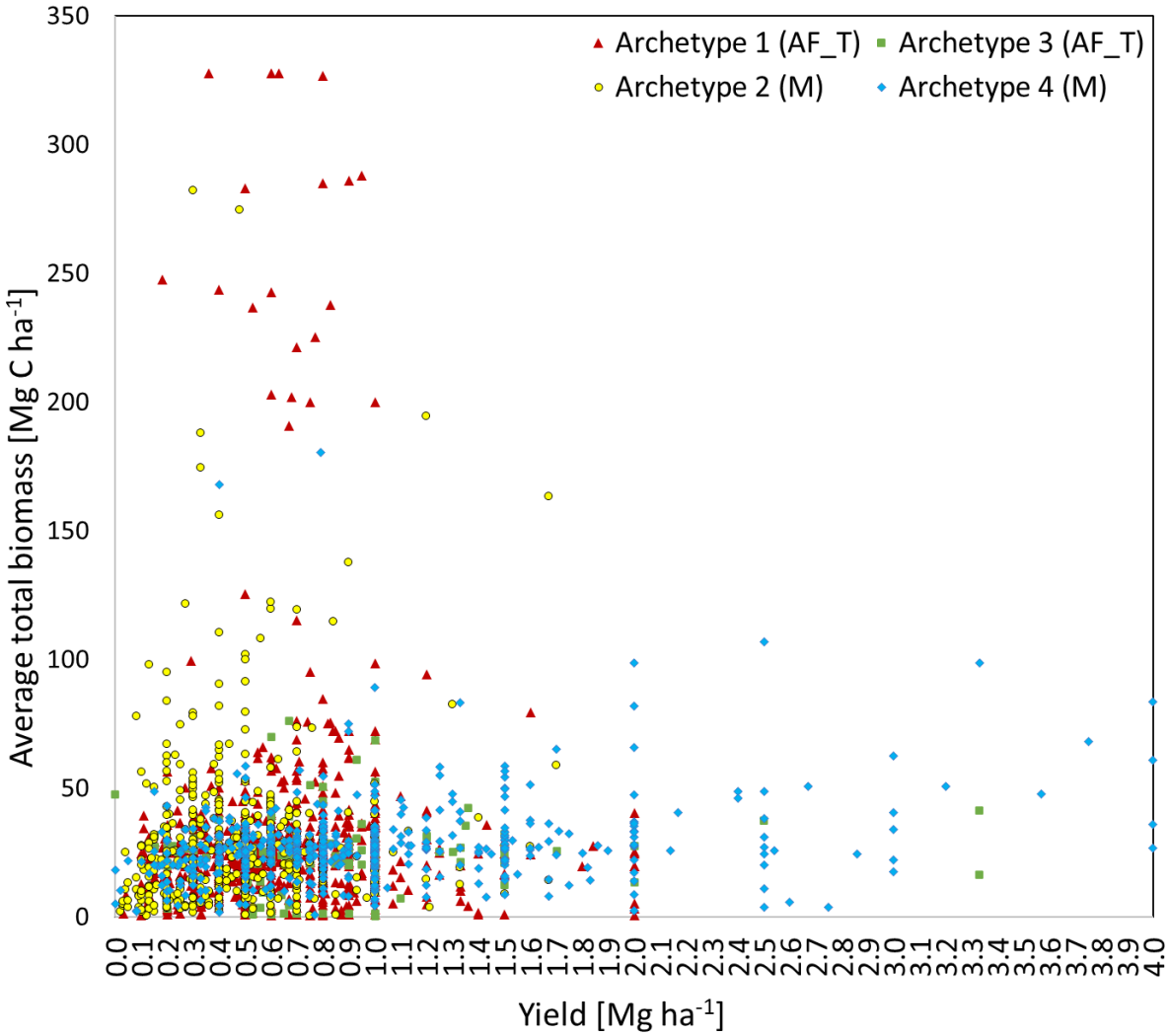

Figure 1. Average total biomass C compared with yield performance in Indonesia