

1. It is not clear how the “theoretical dilution values” were calculated. Were the river soil properties taken into account?

Response: Thanks for the observation. For C and N contents, the “theoretical dilution values” were calculated as weighted values of native soil and river sand based on mass proportions. However, for other soil parameters, such as DOC and microbial properties, the “theoretical values” were calculated as 90%, 70%, 50% and 30% of the measured parameters in C0 treatment for C10, C30, C50 and C70 treatments, respectively (Page 11 Line 4-10). Because total C and N in the sand was not negligible compared to the original soil (Page 14 Line 17-20); however, DOC, available N and P, and microbial parameters might be really low in the river sand.

2. After mixing and refilling, which of course destroyed the original soil structure, a new type of vegetation was planted on the plots. Soil samples were taken after one year. This is very short. I expect that the new vegetation had almost no effect of the newly created soil. Instead, the data presented in this manuscript are the result of 1) the mixing of two soils, 2) the soil-plant relations of the original soil at the plot, and 3) the properties of the river sediment. So, this has basically been a mixing of legacy effects, i.e. mixing the relicts of pre-experimental plant traits-litter quality-decomposition/mineralization process-microbial communities in a soil to get adjusted to changes in litter quality (new vegetation).

Response: The soil samples were samples after two years of plant transplantation (from July 2013 to October 2015, clarified in Page 8 Line 4). This is indeed a short period. We agree with the point that the data of present are mainly the result of mixing of native soil and river sand (mentioned in Page 15 Line 16). However, there were still biogeochemical processes happened as suggested by the significant difference between theoretical dilution and measured parameters (Page 15 Line 22, Page 16 Line 1-22, Page 17 Line 1-9).

3. The experiment should have been done in a more “controlled way”. For instance, by using pure (inert) quartz sand and by analyzing the mixtures at the beginning of the experiment (new vegetation growth at time zero). Subsequently, the new vegetation should grow for at least a decade. Soil sampling at regular intervals (e.g. 3, 6, 9, ...

years) would yield a time series data set (C, N, P, EEA, etc.) that would reflect the adjustment of biogeochemical cycling (microbial communities, and C, N, P stocks) to the new vegetation as a function of soil texture.

Response: We agree with the reviewer's comment that using pure quartz sand can minimize additional C, N and microbial activities inputs. We apologize for not analyzing the mixtures at the beginning of the experiment. For the experimental time, we will take the reviewer's advice to measure these parameters at least a decade to reflect the adjustment of biogeochemical cycling to the new vegetation. After getting long-term data, we can compared long-term results with short-terms ones as we did in this manuscript to better distinguish the mixing effects and interactive effects with vegetation.