Supplement material for the reply to the referee´s comments on

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Productivity of aboveground coarse wood biomass and stand age related to soil hydrology of Amazonian forests in the Purus-Madeira interfluvial area

B. B. L. Cintra[1,2], J. Schietti[1], T. Emillio[1], D. Martins[1], G. Moulatlet[1], P. Souza[1], C. Levis[1], C. A. Quesada[1], and J. Schöngart[1,2]

[1]Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, Amazonas, Brazil
[2]Max Planck Institute for Chemistry, Biogeochemistry Department, Mainz, Germany

Table 1: Stand ages calculated as the mean of the ages of trees with DBH >30 cm and between 10 and 29.9 cm, weighted by the relative number of individuals of each class in the plot.

Plot ID	Stand Age (years)
M1_TN1500	75
M1_TN2500	64
M5_TN-(500)	90
M5_TN1500	103
M8_TS2500	100
M8_TS4500	94
M11_TN1500	96
M11_TN2500	65

Table 2 (refers to Table 1 from the Discussion Paper): Geographical position, hydrology and rainfall patterns of the selected study sites. Elevation above the sea (Shuttle Radar Topographic Mission) digital elevation model estimates the elevation above sea level of each plot. Elevation above nearest drainage data indicate the elevation above the nearest drainage derived from the Height Above Nearest Drainage digital elevation model (Rennó et al., 2008; Nobre et al., 2011); number in parenthesis indicates the flood height of seasonally inundated forests measured in the field. The Soil Water Saturation (SWS) index is explained in more detail in Table 2. Soil water saturation refers to hydrological conditions of the soil observed in field. Rainfall data were obtained from the Brazilian Waters Agency (Agência Nacional de Águas - ANA). Length of dry season refers to number of months with less than 100 mm of rainfall.

Plot ID	Plot Coordinates	Elevation above sea (m)	Elevation above nearest drainage (m)	Soil Water Saturation Index scores	Soil water saturation condition	Mean annual rainfall (mm)	Length of dry season (months)
M01_TN_1500	3°21'3.73"S, 59°50'48.78"W	35.5	1.0 (1.5)	3	Seasonally flooded	2300	3
M01_TN_2500	3°20'55.27"S, 59°50'14.58"W	32.2	3.0 (5.0)	3	Seasonally flooded		
M05_TN_(-)500	4°36'58.05"S, 43°14'37.44"W	48.9	3.3	3	Seasonally water-saturated with no flooding marks	2810	2
M05_TN_1500	4°36'11.82"S, 61°15'28.10"W	50.0	2.0	2	Non flooded	2600	3
M08_TS_2500	5°38'18.54"S, 62°10'41.24"W	69.4	3.4	1	Non-flooded		
M08_TS_4500	5°38'51.38"S, 62° 9'45.25"W	66.6	3.5	2	Non-flooded		
M11_TN_1500	7°12'24.72"S, 63° 7'0.29"W	72.8	3.8	2	Non-flooded		
M11_TN_2500	7°12'38.37"S, 63° 6'30.52"W	69.8	1.6	4	Constantly water-saturated with no flooding marks	2100	4

Table 3 (refers to Table 6 from the Discussion Paper): Estimates of AGWB and C-stocks in AGWB calculated by allometric equation suggested by Feldpausch et al. (2012). For each estimate the error (σ_{AGWB}) is indicated. Furthermore for each plot information on aboveground coarse wood productivity (AGWBP) and carbon sequestration per hectare and year (C-sequestration) and the structural conversion factor ($AGWB_{SCF}$ related to m^2 basal area) are indicated. Here, $AGWBP_C$ was calculated as the sum of the mean of the productivity of all trees for the last five years. Mean canopy height is the average of the height of all sampled trees with DBH > 30 cm. Mean wood density is the mean wood density of all sampled trees with DBH > 30 cm and between 10 and 29.9 cm, weighed by the relative basal area of each DBH classes in the plot. Stand age is the mean number of tree rings of all sampled trees with DBH > 30 cm and between 10 and 29.9 cm, weighed by the relative number of individuals of each DBH classes in the plot.

	Plot ID							
	M01-TN1500	M01-TN2500	M05-TN(-)500	M05-TN1500	M08-TS2500	M08-TS4500	M11-TN1500	M11-TN2500
Number of cored trees								
DBH between 10 and 29.9 cm	29	34	30	25	24	25	28	27
DBH >30 cm	39	35	43	38	49	37	43	34
Eq. (2)								
AGWB (Mg ha^{-1})	138	136	229	291	274	278	294	205
$AGWB_{SCF}$ (Mg m_{BA}^{-2})	8.6	7.9	10.4	10.7	11.1	10.0	12.3	10.0
σ_{AGWB} (Mg ha^{-1})	-16.6	-16.3	-27.5	-34.9	-32.8	-33.4	-35.2	-24.6
C-stock (Mg ha^{-1})	65	64	108	137	129	131	138	96
$AGWBP_c$ (Mg $ha^{-1}year^{-1}$)(Eq. 10)	4.0	3.4	5.5	6.5	5.6	5.9	6.2	6.6
C-sequestration (Mg $ha^{-1}year^{-1}$)	1.9	1.6	2.6	3.0	2.6	2.8	2.9	3.1
Biomass Turnover (%)	2.9	2.5	2.4	2.2	2.1	2.1	2.1	3.2
Structural features								
Basal area (m^2 ha^{-1})	16	17	22	27	25	28	24	21
Mean Canopy height (m)	25±4.5	24±3.9	27±5.0	28±4.0	28±5.9	25±5.3	32±7.9	27±4.9
Mean Wood density (g cm^{-3})	0.65±0.15	0.64±0.13	0.72±0.14	0.71±0.16	0.68±0.13	0.67±0.12	0.65±0.14	0.67±0.16
Stand age (years)	75	64	90	103	100	94	96	65

Table 4: Vertical and horizontal distances from the plots to the nearest drainage. Vertical distances were derived from the Height Above Nearest Drainage digital elevation model (Rennó et al., 2008; Nobre et al., 2011).

	Distance to the nearest drainage (m)	
Plot	Horizontal	Vertical
M01_TN_1500	145	1
M01_TN_2500	324	3
M05_TN_1500	519	3.3
M05_TN_(-)0500	11	2
M08_TS_2500	175	3.4
M08_TS_4500	332	3.5
M11_TN_1500	141	3.8
M11_TN_2500	128	1.6