9 SUPPLEMENTARY MATERIAL

(a) (b) (c)
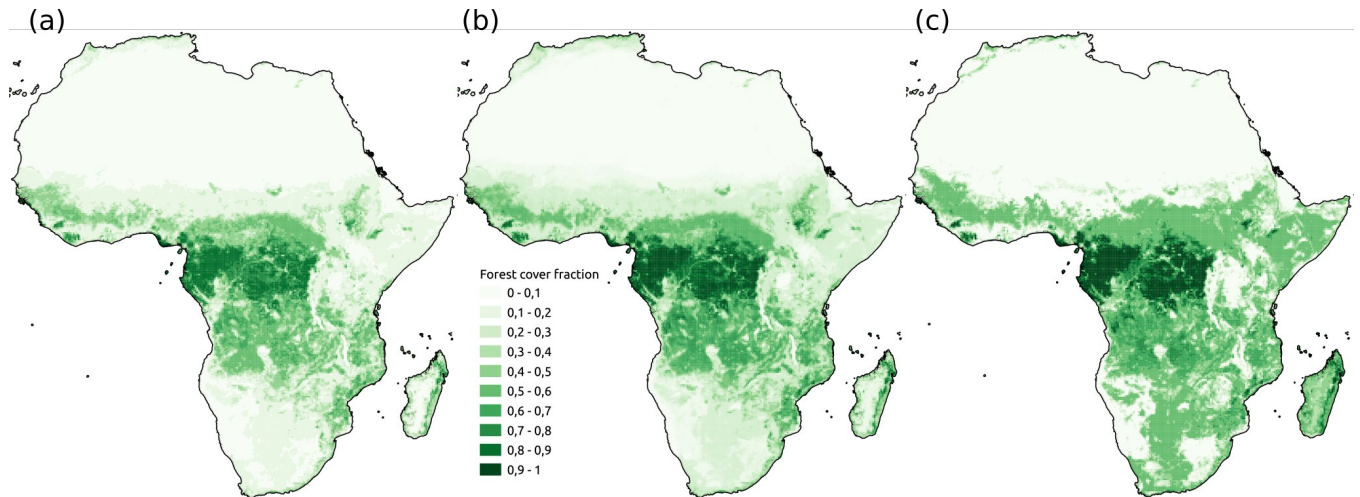
Figure S1: *Forest cover fraction, per ecoregion, from PFT maps based on different cross-walking tables. Forest cover fraction was calculated by summing forest PFTs, i.e., PFTs 2, 3, 4, 5 and 6 (table 1). (a) PFT map obtained by using the 2.5 percentile of the distribution of refined cross-walking tables, (b) PFT map obtained by using the 97.5 percentile of the distribution of refined cross-walking tables, (c) PFT map obtained by using the original cross walking table [Poulter et al. 2015].*
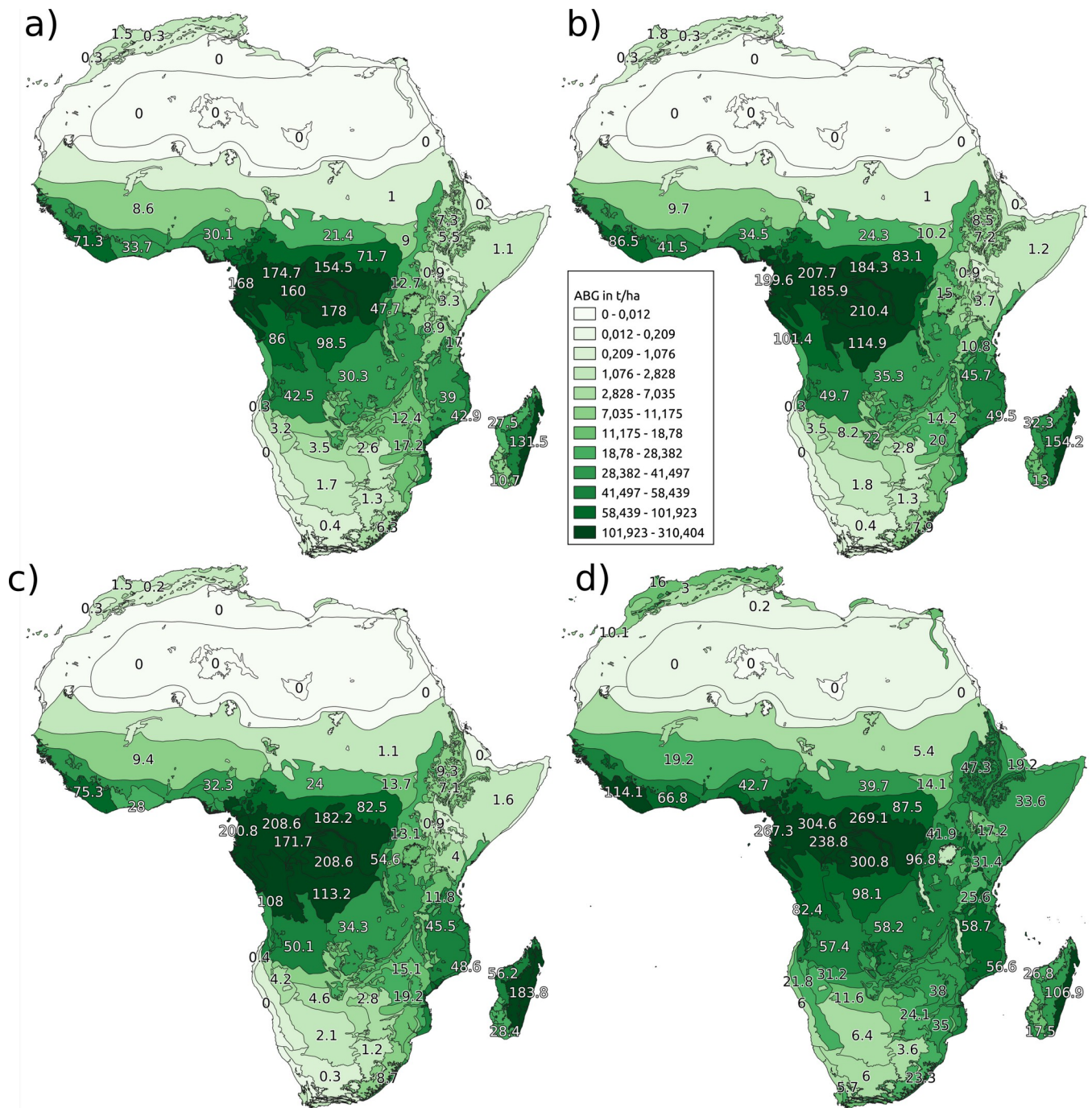
Figure S2. *Standing biomass (t.ha⁻¹) per ecoregion simulated with the ORCHIDEE land surface model. (a) Model initialization making use of the 2.5 percentile of the distribution of refined PFT maps, (b) Model initialization making use of the 97.5 percentile of the distribution of refined PFT maps, (c) model initialization based on the original PFT map, (d) estimation from the CESBIO ABG map [Bouvet et al. 2018].*
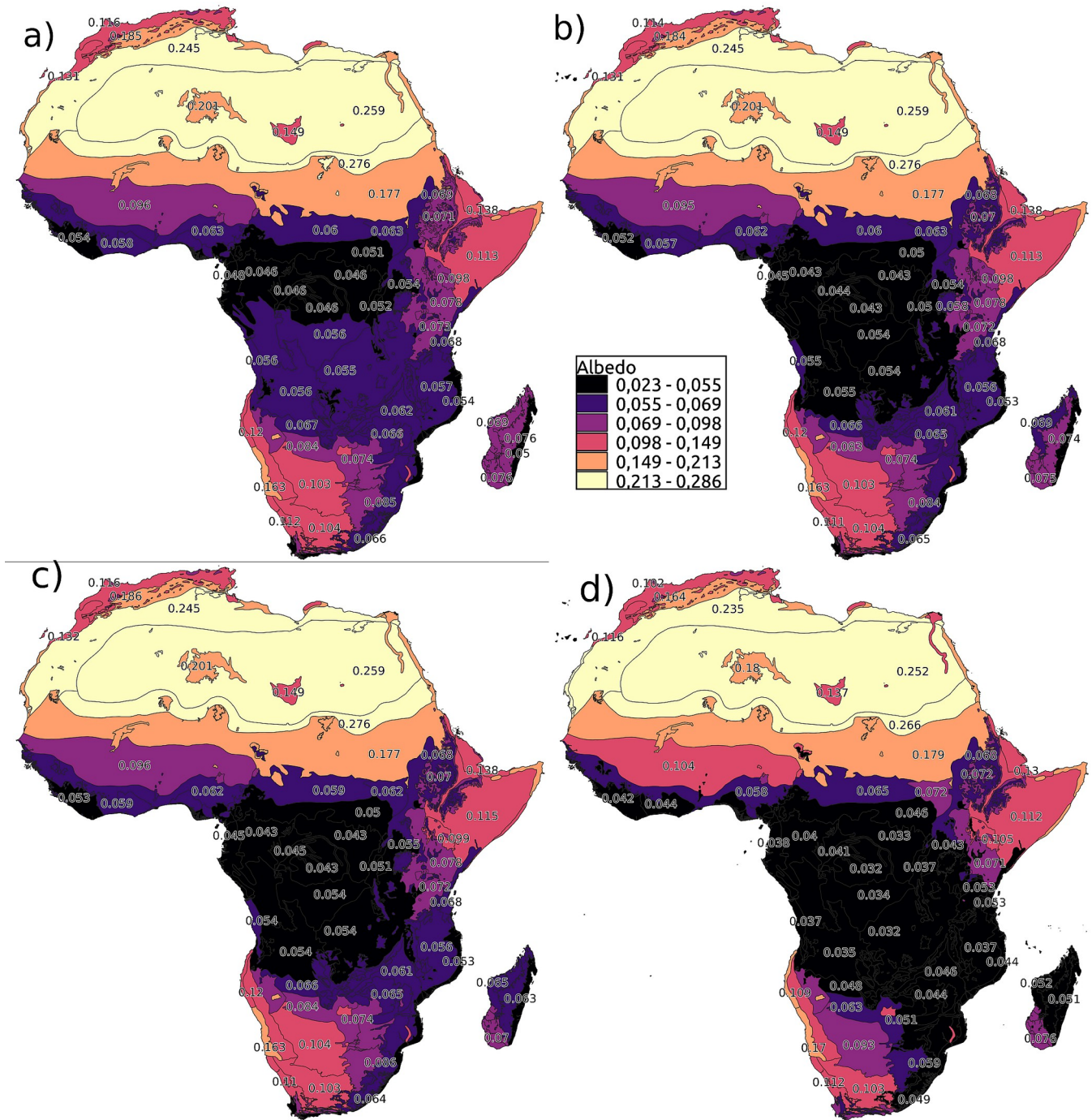
Figure S3. *visible Albedo per ecoregion simulated with the ORCHIDEE land surface model. (a) Model initialization making use of the 2.5 percentile of the distribution of refined PFT maps, (b) Model initialization making use of the 97.5 percentile of the distribution of refined PFT maps, (c) model initialization based on the original PFT map, (d) estimation from the MODIS albedo map.*