

Supplementary Table S1 – Estimates of total *SOC* per biome. Biomes are defined according to Prentice et al.³³ as in Beer et al.³⁴. The ranges report the 2.5th (P 2.5) and 97.5th (P 97.5) percentiles.

Biome type	Total stocks (PgC)			Carbon density (kgC m ⁻²)		
	Mean	P 2.5	P 97.5	Mean	P2.5	P97.5
Tropical forests	480	352	678	23.9	17.6	33.8
Temperate forests	258	196	351	19.2	14.6	26.2
Boreal forests	466	392	657	31.6	26.6	44.5
Tropical savannahs and grasslands	288	207	417	15.1	10.8	21.8
Temperate grasslands and shrublands	165	127	224	14.7	11.3	19.9
Deserts	239	175	336	8.8	6.5	12.5
Tundra	156	105	187	19.9	13.4	23.9
Croplands	327	242	460	21.0	15.6	29.5
Wetlands	18	13	25	19.2	14.3	26.7
Total	2397	1837	3257	18.5	14.1	25.1

66. Prentice, I. C. *et al.* in *Climate Change 2001: The Scientific Basis* (eds Houghton, J. T. *et al.*) 183–237 (Cambridge Univ Press, 2001).

67. Beer, C. *et al.* Terrestrial gross carbon dioxide uptake: global distribution and covariation with climate. *Science* **329**, 834–838 (2010).