Soil Research 2021 **59**, 383–395
doi:10.1071/SR19317_AC

Supplementary material for

Spatiotemporal variability of soil organic carbon for different topographic and land use types in a gully watershed on the Chinese Loess Plateau

Fan Yang[A,B,C], *Xiaorong Wei*[A,B], *Mingbin Huang*[A,B,D], *Chenhui Li*[B], *Xiaofang Zhao*[B] *and Zhongdian Zhang*[B]

[A]State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources, Yangling, Shaanxi 712100, China.

[B]Institute of Soil and Water Conservation, Northwest A&F University, Yangling, Shaanxi 712100, China.

[C]University of Chinese Academy of Sciences, Beijing 100049, China.

[D]Corresponding author. Email: hmbd@nwsuaf.edu.cn

Table S1. Geostatistical parameters of the best-fitted semi-variogram models for residuals of multiple linear regression in different soil layers in 2002 and 2018

	Soil layer (cm)	Model	Nugget (C_0)	Sill (C_0+C_1)	Range (m)	GD (C_0/C_0+C_1)	R^2	RSS
2018	0–20	Exponential	0.42	3.50	369	0.12	0.55	0.94
	20–40	Spherical	0.03	1.14	145	0.02	0.15	0.16
2002	0–20	Spherical	0.81	2.81	349	0.29	0.41	1.59

Table S2. Summary statistics of SOC spatial distribution for different topographic types in the Wangdonggou watershed in 2002 and 2018

Year	Soil layer (cm)	Topographic types	Mean	SD	CV (%)
2018	0–20	Tableland	7.79	0.82	10.5
		Sloping land	8.06	1.40	17.4
		Gully	9.59	1.55	16.1
		All areas	8.38	1.48	17.6
	20–40	Tableland	5.72	0.50	8.74
		Sloping land	4.92	0.56	11.4
		Gully	4.88	0.59	12.1
		All areas	5.21	0.68	13.1
2002	0–20	Tableland	7.17	0.69	9.58
		Sloping land	6.38	1.07	16.8
		Gully	7.85	1.17	15.0
		All areas	7.06	1.15	16.2