Supplementary for

Riverine carbon export in the arid-semiarid Wuding River catchment on the Chinese Loess Plateau

Lishan Ran¹, Mingyang Tian², Nufang Fang³, Suiji Wang⁴, Xixi Lu^{2,5}, Xiankun Yang⁶, Frankie Cho¹

¹Department of Geography, The University of Hong Kong, Pokfulam Road, Hong Kong ²School of Ecology and Environment, Inner Mongolia University, Hohhot, China ³State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and Water Conservation, Northwest A&F University, Yangling, China ⁴Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China

⁵Department of Geography, National University of Singapore, Singapore ⁶School of Geographical Sciences, Guangzhou University, Guangzhou, China



Figure S1. Time series of spontaneous flow discharge and total suspended solids in the Wuding River at Baijiachuan gauge in 2017. The duration started from 1 January until 31 December 2017.



Figure S2. Spatial location of check dam-formed reservoirs within the Wuding catchment.

	Sandy subcatchment			Loess subcatchment			Wuding catchment			
SO	Spring	Summer	Autumn	Spring	Summer	Autumn	Spring	Summer	Autumn	%total
	(km ²)									
1	2.33±1.38	2.33±1.36	2.5±0.96	6.63±4.33	5.05±4.61	5.63±4.41	8.93±5.67	7.38±5.83	8.12±5.26	20%
2	1.7±0.77	1.33±0.98	2.48 ± 2.05	2.65±0.87	1.73±0.82	3.04±1.52	4.2±1.53	2.83±1.59	5.06±3.14	10%
3	1.45±1.1	1.37±0.96	2.15±1.98	1.14±0.14	$1.84{\pm}1.56$	1.28±0.5	2.8±2.11	3.26±2.38	3.81±3.88	8%
4	1.45±0.82	1.39±0.95	1.38±0.29	2.51±0.07	2.19±1.32	1.6±0.92	3.7±1.65	3.5±2.13	3.04±1.12	9%
5	0.55±0.09	0.78±0.03	0.79 ± 0.07	3.11±3.36	3.2±4.42	3.13±4.06	3.77±4.12	4.01±5.18	4±4.88	10%
6	5.03	5.01	4.79	13.9±4.94	10.69 ± 7.84	12.41±4.99	18.88±8.66	15.24±11.47	16.82 ± 8.42	43%
Total	12.9			27.2			40.1			
%total	32%			68%			100%			

Table S1. Water surface area of the Wuding River drainage network (expressed as mean±standard deviation).