

Table S1. Summary of previous studies on the relationship between land use and water quality.

Case Study				Water Quality Parameter						Land Use Percentage	Landscape Pattern	Other Factors	Author, Year
Research Region	Number of Sites	Spatial Scale	Time Scale	DO	BOD	COD	COD _{Mn}	NH ₃ -N	TP				
Shandong Province (China)	45	Control Units	2009-2017	✓	✓	✓	✓	✓	✓	✓	✓	✗	Our study
Zhejiang Province (China)	136	Subbasin, Buffer	2017. 09-11	✓	✗	✗	✓	✓	✓	✓	✓	✗	Qing Gu, 2019[1]
Huzhou City (China)	34	Buffer, County	2001-2007	✗	✓	✗	✓	✓	✓	✓	✓	✗	Rui Xiao ,2016[2]
Beiyun River Watershed (China)	25	Subbasin	2014-2015	✗	✗	✓	✗	✓	✓	✓	✗	Rainfall, Point source	Jin Liu ,2018[3]
Huai River Basin (China)	18	Subbasin; Buffer	1994-2005	✓	✗	✗	✓	✓	✗	✓	✗	Point Source	Xiaoyan Zhai,2014[4]
Hujiashan watershed (China)	15	Subbasin	2008-2012	✗	✗	✗	✗	✓	✗	✓	✓	Topography, Hydrology	Y. Zhou ,2017[5]
Huai River Basin (China)	31	Subbasin	2003-2010	✗	✗	✓	✗	✓	✓	✓	✓	✗	Wangshou Zhang., 2018[6]
Huai River Basin (China)	17	Subbasin, Buffer	2000-2014	✓	✗	✗	✓	✓	✓	✓	✗	Point source, Topography	Wei Shi, 2016[7]
Danjiangkou Reservoir (China)	9	Subbasin	2005-2009	✓	✗	✗	✓	✓	✓	✓	✓	Topography, Soils	L. Ai, 2015[8]
Han River (South Korea)	118	Subbasin, Buffer	1993-2002	✓	✓	✓	✗	✗	✓	✓	✗	Topography, Soils	Heejun Chang,2008[9]
Sarapuí River Basin (Brazil)	6	Riparian Zone, Watersheds	2013-2014	✓	✗	✗	✗	✗	✓	✓	✗	✗	Kaline deMello,2018[10]
uMngeni Catchment (South Africa)	9	Subbasin	1987-2013	✗	✗	✗	✗	✓	✓	✓	✗	✗	Jean Nepomuscene Namugize,2018 [11]

References for Table S1

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