

Table S1. Model input and data sources.

Related model	Data requirements	Type	Spatiotemporal resolution	Note
Carbon storage and sequestration in the InVEST model	Land use/ Land cover	Shapefile	2000-2020	Including the parameter values of the carbon density for each land use [1,2].
	carbon pools table	.CSV file		
Water yield in the InVEST model	Land use/ Land cover	Shapefile	2000-2020	Interpolated based on annual data from National Meteorological Information Center (http:// data. cma. cn/) Soil data from the Harmonized World Soil Database (https://www.fao.org/) were used to calculate soil depth. Environmental and Ecological Science Data Center for West China (http://westdc.westgis.ac.cn/) MODIS Global Evapotran-spiration Project (http://www. ntsg. umt. edu/ proje ct/ mod16) Calculated based on precipitation data from China Meteorological Data Center (http:// data. cma. cn/) Geospatial Data Cloud (http:// www. gscloud. cn) Including water consumption (by land use category) data [2].
	Annual average precipitation (mm)	Raster	1 km, 2000-2020	
	Soil depth (mm)	Raster	1 km, 2000	
	Plant-available water content [0,1]	Raster	1 km, 2008	
	Reference evapotranspiration (mm)	Raster	30 m, 2000-2020	
	Rainfall erosivity index (mm)	Raster	30 m, 2000-2020	
	Watersheds	Shapefile		
	Biophysical table	.CSV file		
Habitat quality in the InVEST model	Land use/ Land cover	Shapefile	2000-2020	Threat data includes each threat's relative weight and its impact across space; sensitivity table includes the sensitivity of habitat types to each threat [2,3].
	Threat data/ Sensitivity table	.CSV file		

1. Wu, W.H.; Xu, L.Y.; Zheng, H.Z.; Zhang, X.R. How much carbon storage will the ecological space leave in a rapid urbanization area? Scenario analysis from beijing-tianjin-hebei urban agglomeration. *Resour. Conserv. Recycl.* **2023**, *189*, 106774. <https://doi.org/10.1016/j.resconrec.2022.106774>.
2. Sharp, R.; Tallis, H.T.; Ricketts, T.; Guerry, A.D. *In vest 3.5.0 user's guide*. The Natural Capital Project, Stanford University, University of Minnesota, The Nature Conservancy and World Wildlife Fund: 2018.
3. Deng, Y.; Jiang, W.; Wang, W.; Lv, J.; Chen, K. Urban expansion led to the degradation of habitat quality in the beijing-tianjin-hebei area. *Acta Ecol. Sin.* **2018**, *38*, 4516-4525. <http://dx.doi.org/10.5846/stxb201712062200>.