

Urbanization-Driven Changes in Land-Climate Dynamics: A Case Study of Haihe River Basin, China

Supplementary Materials

Table S1. The databases of the key land-climate indicators.

Indicator	Database	Provider	Original cadence	Spatial resolution
NDVI	MOD13Q1.006 Terra	NASA LP DAAC at the USGS EROS Center	16-day	250 m
albedo	MCD43A1.005 BRDF	NASA LP DAAC at the USGS EROS Center	16-day	500 m
LST	MODLT1M	International Scientific & Technical Data Mirror Site, Computer Network Information Center, Chinese Academy of Sciences	1-month	1000 m
CWC	MOD08 V6 Atmosphere Monthly Global Product	NASA GSFC	1-month	1 arc degrees
P	Global Land Data Assimilation System	NASA	3-hour	0.25 arc degrees

Table S2. The area proportion dynamics of the land use and cover change from 2000 to 2015 in the Haihe River Basin and the trends regression.

Year	Agricultural land	Forest	Grassland and shrub	Waters and wetland	Bare land	Urban
2000	53.05%	10.02%	33.25%	1.47%	0.01%	2.20%
2001	52.90%	10.20%	32.92%	1.47%	0.01%	2.50%
2002	52.77%	10.21%	32.79%	1.46%	0.01%	2.76%
2003	52.57%	10.30%	32.61%	1.46%	0.01%	3.05%
2004	52.12%	10.45%	32.39%	1.46%	0.01%	3.57%
2005	51.91%	10.45%	32.34%	1.46%	0.01%	3.83%
2006	51.63%	10.44%	32.26%	1.45%	0.01%	4.21%
2007	51.37%	10.46%	32.19%	1.43%	0.01%	4.54%
2008	51.11%	10.47%	32.15%	1.40%	0.01%	4.86%
2009	50.95%	10.48%	32.09%	1.40%	0.01%	5.07%
2010	50.65%	10.47%	32.07%	1.38%	0.01%	5.42%
2011	50.44%	10.46%	32.08%	1.38%	0.01%	5.63%
2012	50.18%	10.47%	32.07%	1.37%	0.01%	5.90%
2013	49.84%	10.47%	32.02%	1.36%	0.02%	6.29%
2014	49.50%	10.45%	32.02%	1.37%	0.02%	6.64%
2015	49.25%	10.45%	32.00%	1.37%	0.02%	6.91%
Linear regression by year						
Slope	-2.58E-03 ↓	2.12E-04 ↑	-7.04E-04 ↓	-8.60E-05 ↓	5.74E-06 ↑	3.15E-03 ↑
Intercept	5.69	-0.321	1.74	0.187	-1.14E-02	-6.28
R ²	0.996	0.556	0.801	0.917	0.459	0.997
<i>p</i>	< 0.0001	0.0009	< 0.0001	< 0.0001	0.004	< 0.0001

↑ : increasing trend; ↓ : decreasing trend.

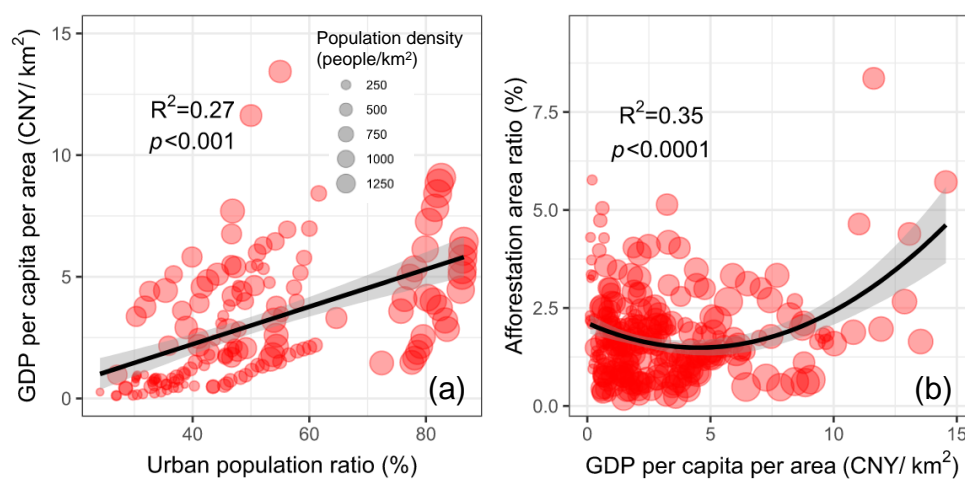


Figure S1. The bivariate regression between the urban population ratio and the regional gross domestic product (GDP) per capita per area ($y = 0.077x - 0.847$) (a). The bivariate regression between the regional GDP and the regional afforestation area ratio ($y = 0.029x^2 - 0.259x + 2.083$) in the 26 cities of the Haihe River Basin during the period 2000–2015 (b).