

## Supplementary Table and Figure

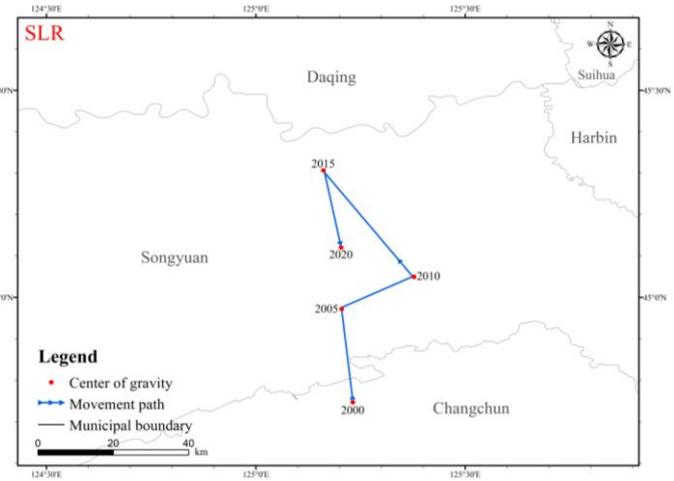
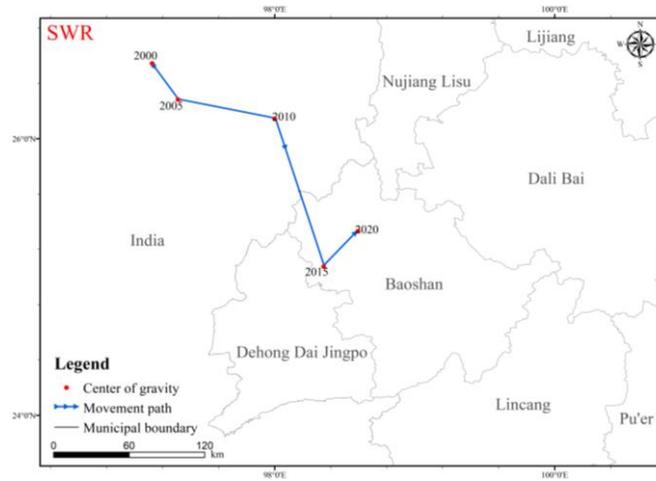
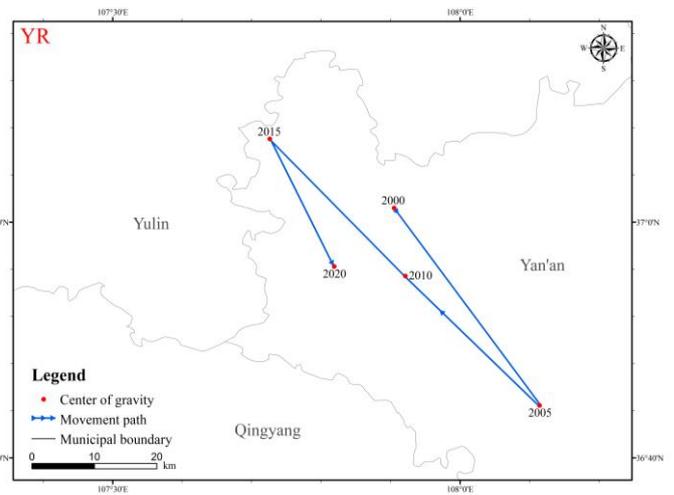
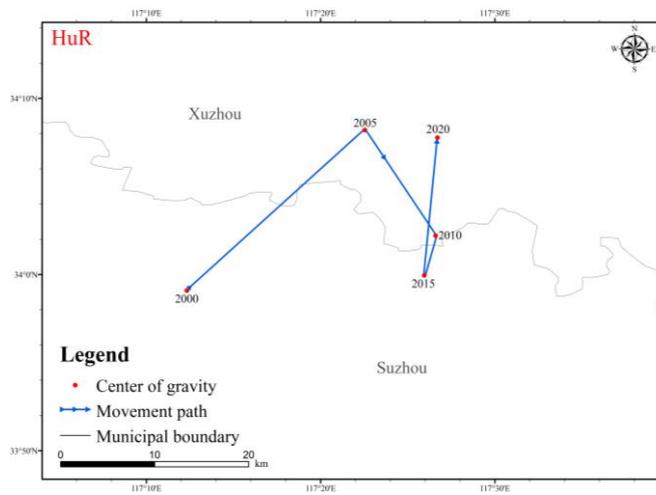
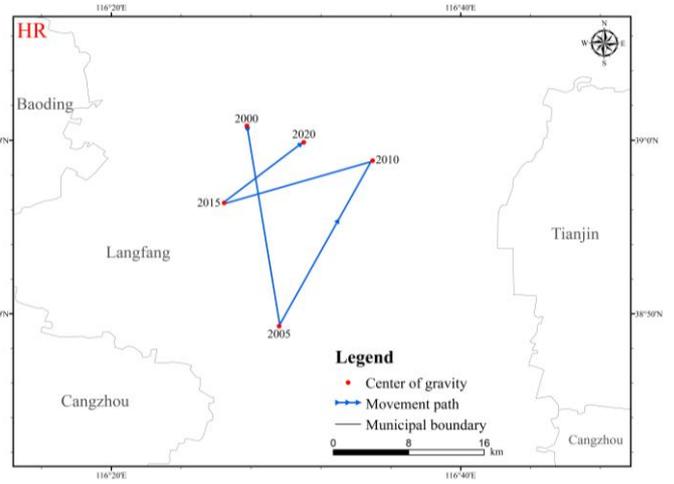
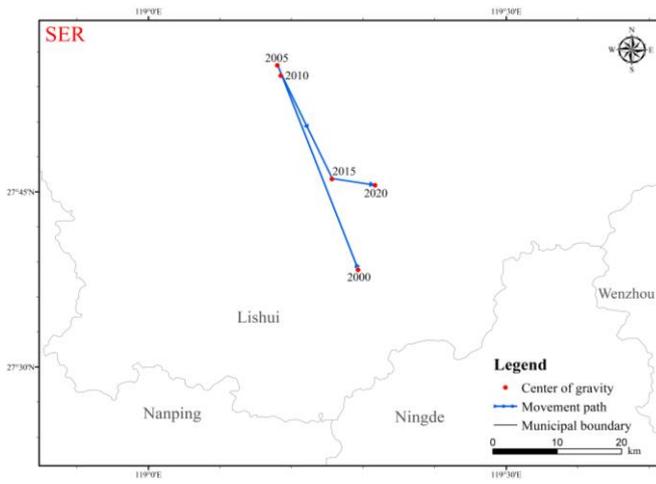
**Table S1.** The coordinates of the center of gravity, moving direction and moving distance of artificial water bodies in China and river basins from 2000 to 2020.

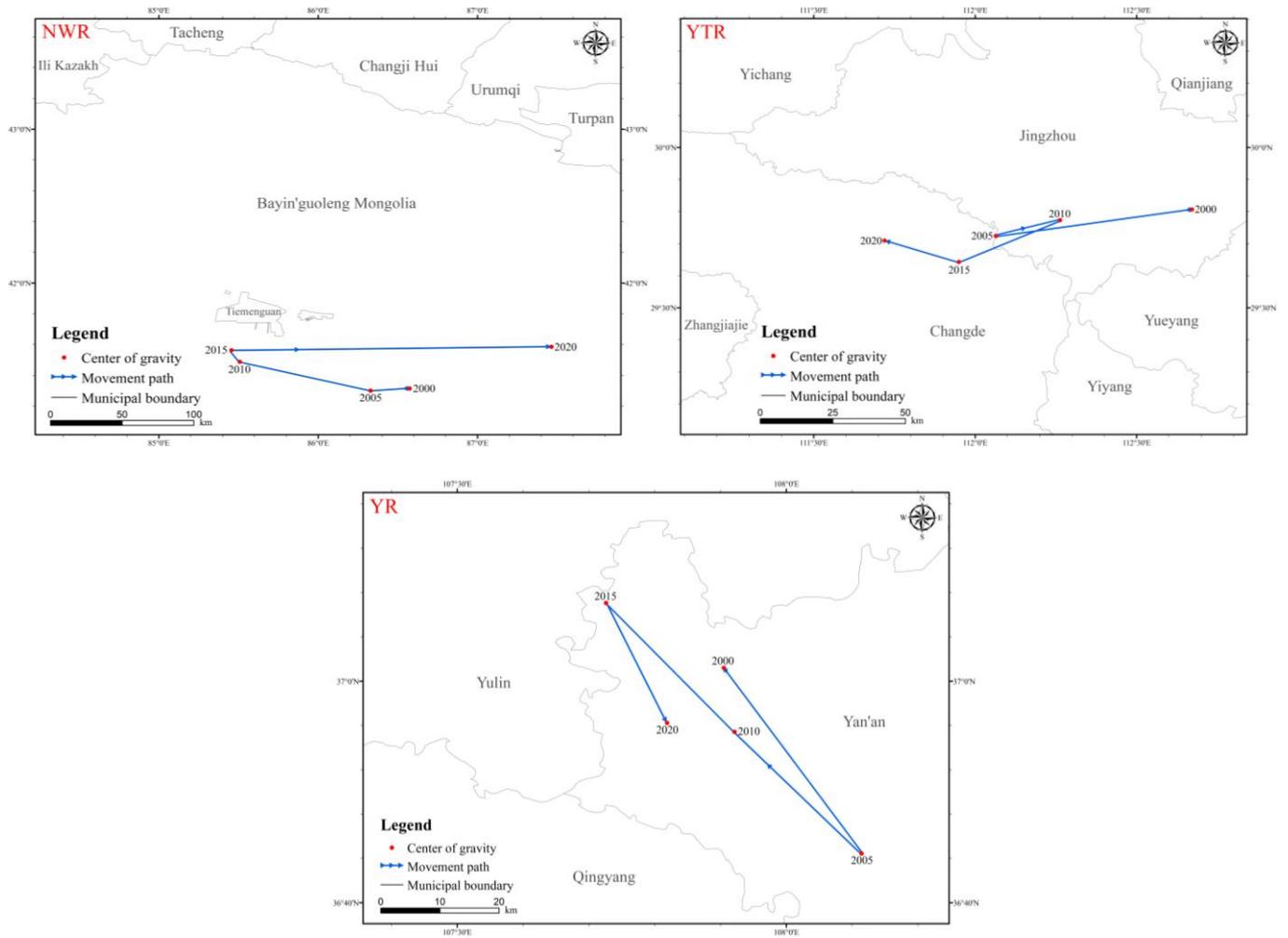
Region	Year	Lon(°)	Lat(°)	Moving Direction	Moving Distance(km)
China	2000	113.198	34.087	--	--
	2005	113.256	34.713	northeast	69.859
	2010	113.275	34.610	southeast	11.544
	2015	113.074	34.785	northwest	29.581
	2020	113.201	34.657	southeast	19.993
HR	2000	116.463	39.014	--	--
	2005	116.493	38.821	southeast	21.667
	2010	116.583	38.981	northeast	20.265
	2015	116.441	38.940	southwest	16.378
	2020	116.517	38.998	northeast	10.637
YR	2000	107.905	37.020	--	--
	2005	108.114	36.741	southeast	38.774
	2010	107.921	36.924	northwest	29.560
	2015	107.726	37.118	northwest	30.562
	2020	107.819	36.937	southeast	22.530
SLR	2000	125.232	44.747	--	--
	2005	125.205	44.972	northwest	25.230
	2010	125.378	45.050	southeast	21.053
	2015	125.162	45.307	northwest	37.306
	2020	125.204	45.120	southeast	21.217
YTR	2000	112.671	29.807	--	--
	2005	112.064	29.724	southwest	68.094
	2010	112.263	29.773	northeast	22.731
	2015	111.949	29.643	southwest	37.708
	2020	111.720	29.710	northwest	26.576
SER	2000	119.293	27.639	--	--
	2005	119.180	27.931	northwest	34.767
	2010	119.256	27.768	southeast	19.912
	2015	119.185	27.916	southeast	18.198
	2020	119.317	27.759	southeast	22.723
HuR	2000	117.205	33.985	--	--
	2005	117.376	34.137	northeast	25.354
	2010	117.443	34.037	southeast	13.409
	2015	117.433	33.999	southwest	4.343
	2020	117.445	34.130	northeast	14.548
NWR	2000	86.574	41.315	--	--
	2005	86.329	41.301	southwest	27.309
	2010	85.507	41.489	northwest	93.611

	2015	85.456	41.564	northwest	10.126
	2020	87.464	41.586	northeast	223.161
	2000	97.124	26.544	--	--
	2005	97.309	26.283	southeast	35.546
SWR	2010	97.999	26.144	southeast	78.156
	2015	98.350	25.075	southeast	124.976
	2020	98.594	25.332	northeast	39.351
	2000	110.708	22.791	--	--
	2005	110.802	22.833	northeast	11.389
PR	2010	110.598	22.949	northwest	26.087
	2015	110.668	22.855	southeast	12.980
	2020	110.411	23.054	northwest	36.052

**Table S2.** List of acronyms in this article.

Acronym	Specific Meaning	Acronym	Specific Meaning
SER	Southeastern River Basins	HR	Haihe River Basin
HuR	Huaihe River Basin	YR	Yellow River Basin
NWR	Northwest River Basin	SLR	Songliao River Basin
SWR	Southwest River Basins	YTR	Yangtze River Basin
PR	Pearl River Basin	GEE	Google Earth Engine
BRA	Bohai Rim Aquaculture	HBA	Haizhou Bay Aquaculture
HDP	Heihe Diversion Project	TK	Tankeng Reservoir
ASW	Annual Surface Water data in km <sup>2</sup>	GSWE	Global Surface Water Explorer
JRC	European Commission's Joint Research Centre	China-IWRHR	Dam location data provided by the China Institute of Water Resources and Hydropower Research
China-LDRL	The China Open Data Set on Large Dams, Reservoirs and Lakes developed and freely shared by Wang et al.	GRanD v1.3	The Global Reservoir and Dam Database curated and hosted by Global Dam Watch
FAO	Food and Agriculture Organization	AQUASTAT	A global georeferenced database of dams collected by FAO's Global Information System on Water and Agriculture
China-MSWD	Self-developed China Monthly Surface Water Dataset	China-ASWD	The China Annual Surface Water Dataset





**Figure S1.** The movement trajectory of the center of gravity of artificial water bodies in different river basins in China from 2000 to 2020.