Figure S1a: Simulation with Neighborhood 3*3; New Changes = 5201 pixels = $5201km^2$

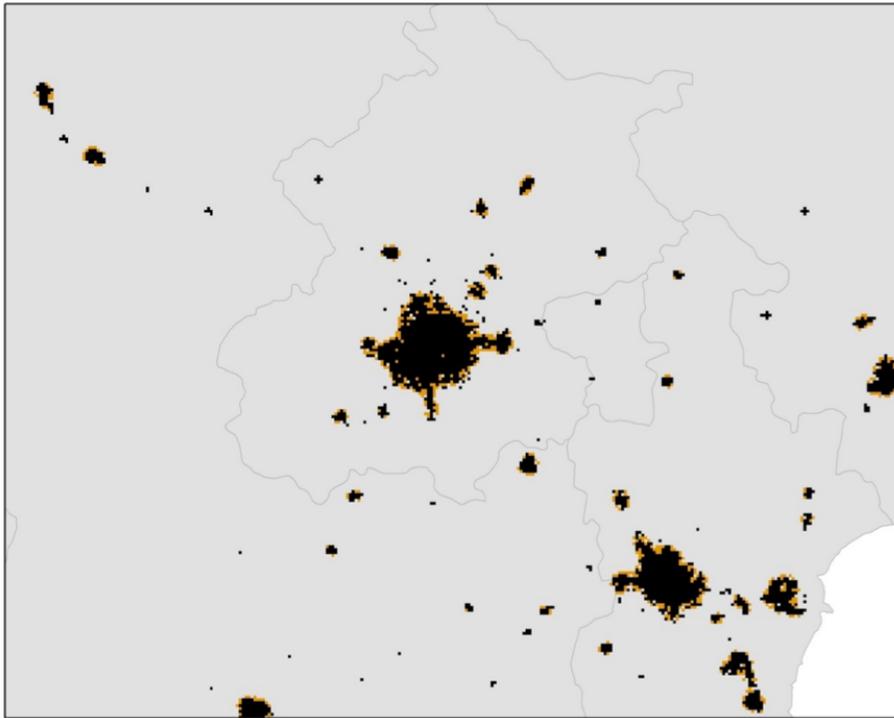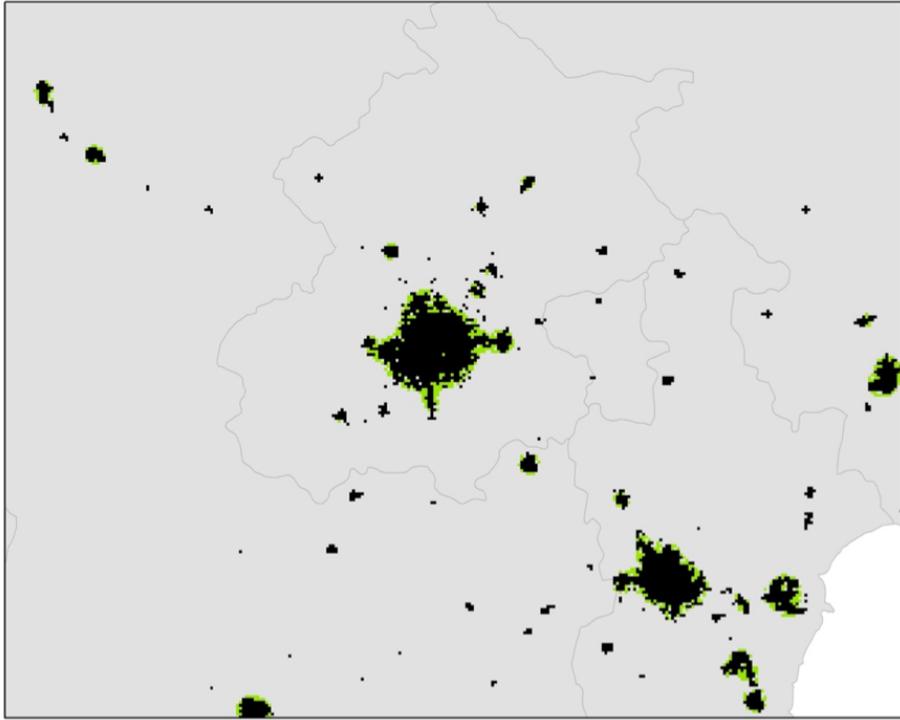Figure S1b: Simulation with Neighborhood 5*5; New Changes = 6467 pixels = $6467km^2$

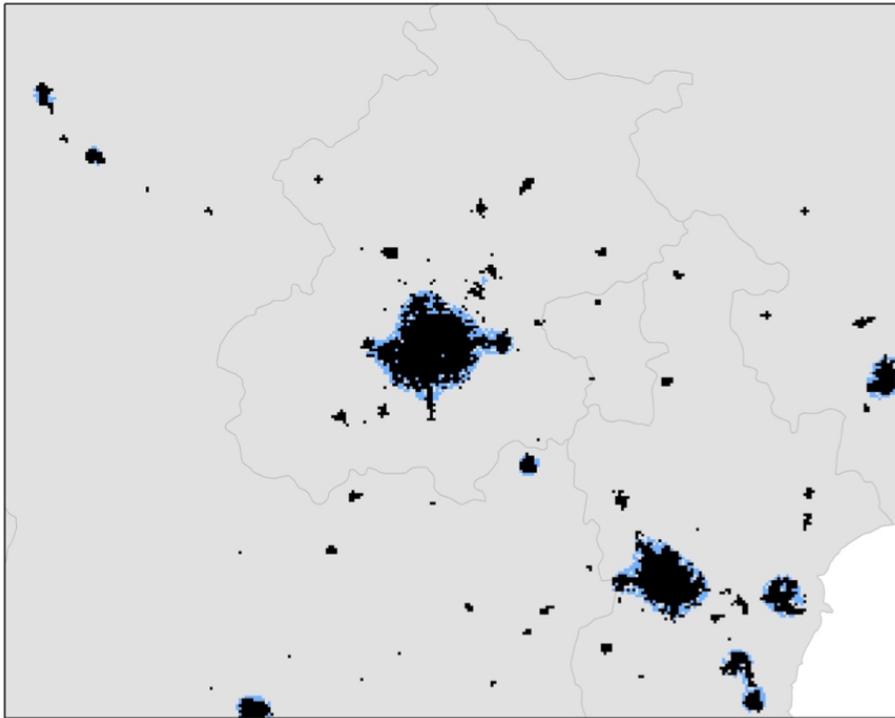Figure S1c: Simulation with Neighborhood 7*7; New Changes = 5887 pixels = $5887km^2$

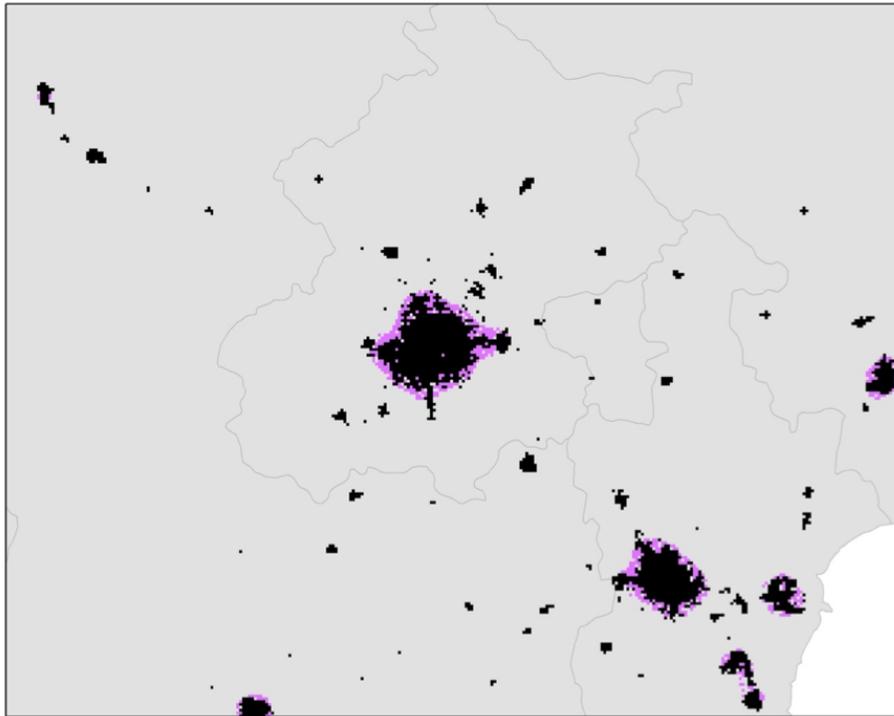Figure S1d: Simulation with Neighborhood 9*9; New Changes = 6102 pixels = $6102km^2$

Figure S1e: Simulation with Neighborhood 11*11; New Changes = 5614 pixels
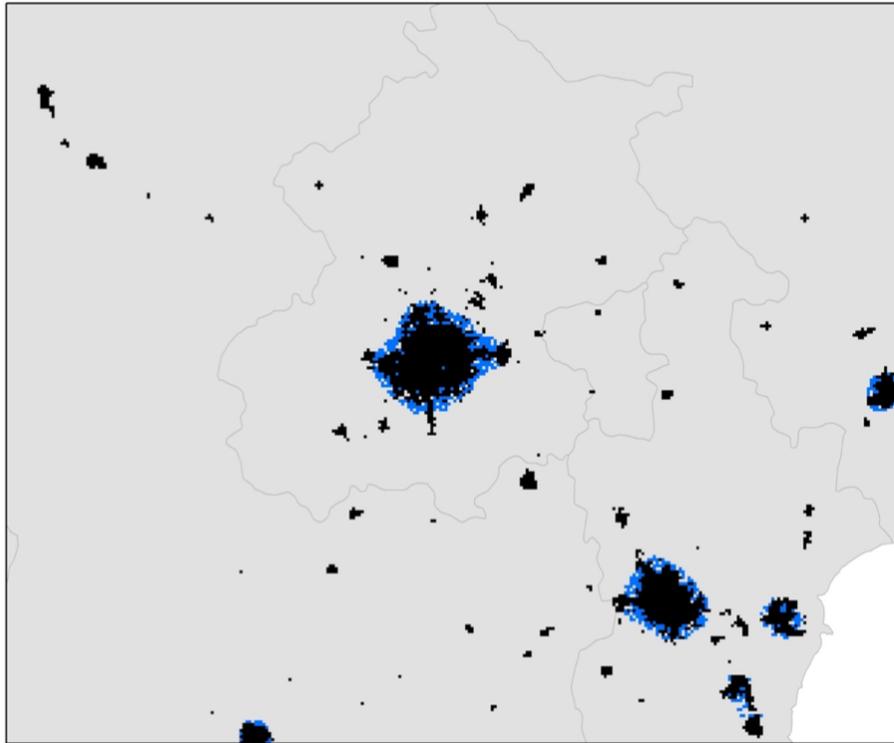$= 5614km^2$

Figure S1f: Simulation with Neighborhood 13*13; New Changes = 5516 pixels $= 5516 km^2$

Accuracy Assessment on the model with 3*3 neighborhood and an urban ratio of 0.25

OID_	ClassValue	C_0	C_1	Total	U_Accuracy	Kappa
			N1P25, stratified equalized			
	C_0	24978	5218	30196	0.827195655	0
	C_1	22	19782	19804	0.998889113	0
	Total	25000	25000	50000	0	0
	P_Accuracy	0.99912	0.79128	0	0.8952	0
	Kappa	0	0	0	0	0.7904

Accuracy Assessment on the model with 3*3 neighborhood and an urban ratio of 0.25

OID_	ClassValue	C_0	C_1	Total	U_Accuracy	Kappa
			N2P33, Stratified equalized			
	C_0	24981	5509	30490	0.819317809	0
	C_1	19	19491	19510	0.99902614	0
	Total	25000	25000	50000	0	0
	P_Accuracy	0.99924	0.77964	0	0.88944	0
	Kappa	0	0	0	0	0.77888

Accuracy Assessment on the model with 7*7 neighborhood and an urban ratio of 0.3125

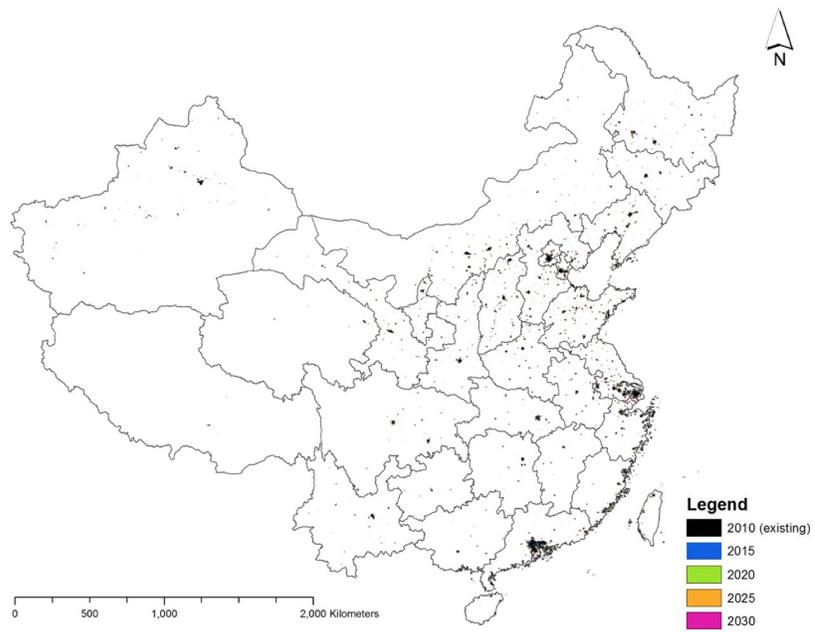| OID_	ClassValue	C_0	C_1	Total	U_Accuracy	Kappa
			N3P3125, Stratified Equalized			
	C_0	24981	5790	30771	0.811835819	0
	C_1	19	19210	19229	0.999011909	0
	Total	25000	25000	50000	0	0
	P_Accuracy	0.99924	0.7684	0	0.88382	0
	Kappa	0	0	0	0	0.76764

Figure S2: Accuracy Assessment

Figure S3: Final urban simulation map