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Coupling Mechanisms of Land Use and Carbon–Heat Risks: A Health–Equity Oriented Study in Hangzhou

Rong XIA[1,2], Yunshan WAN[2,3], Feng QIAN[3], Hao YUAN[3], Yafei ZHAO[2,4], Paolo Vincenzo GENOVESE[2,3,*]

1 School of Landscape Architecture, Zhejiang A&F University, Hangzhou 311300, China

2 International Center of History, Critics of Architecture and Restoration of Historical Heritage (ICHCR), Zhejiang University, Hangzhou 310058, China

3 College of Civil Engineering and Architecture, Zhejiang University, Hangzhou 310058, China

4 School of Smart City Engineering, Qingdao Huanghai University, Qingdao 266427, China

***CORRESPONDING AUTHOR**

Address: No. 866, Yuhangtang Road, Xihu District, Hangzhou 310058, China

Email: pavic@zju.edu.cn

Supplementary Table 1: Details of key performance indicators for each model during the 2022–2025 prediction period

Model	*OA*	*k*	*F1-score*	*QD*	*AD*	*SSS*	LPI	*FI*
CA	0.9002	0.8402	0.6485	0.0181	0.0317	0.9002	0.9320	0.0362
Markov	0.8909	0.8187	0.5416	0.0277	0.0314	0.8909	0.9223	0.0554
CA-Markov	0.8995	0.8385	0.5883	0.0191	0.0314	0.8995	0.9309	0.0382
PLUS	0.9222	0.8326	0.6430	0.0045	0.0733	0.9222	0.9955	0.0090

Supplementary Table 2: Details of changes of land use types and LUCE between 2025 and 2030

Land use type	**Area 2025 (hm^2)**	**LUCE 2025 (tC/yr)**	**Area 2030 (hm^2)**	**LUCE 2030 (tC/yr)**	**Area change (hm^2)**	**LUCE change (tC/yr)**	**% LUCE change**
Arable land	51,204.98	23,605.50	47,442.53	21,871.01	−3,762.45	−1,734.49	−7.3
Forest land	85,527.83	−432,086.60	83,537.81	−422,033.02	−1,990.02	+10,053.58	−2.3
Grassland	2,612.85	−2,479.59	2,240.92	−2,126.63	−371.93	+352.96	−14.2
Water body	38,420.85	−9,720.48	38,566.00	−9,757.20	+145.15	−36.72	+0.4
Construction land	154,024.14	13,883,735.98	160,029.88	14,425,093.38	+6,005.74	+541,357.40	+3.9
Unused land	3,055.34	−15.28	3,028.85	−15.14	−26.49	+0.13	−0.9
Total	**334,845.99**	**13,463,039.53**	**334,845.99**	**14,013,032.40**	**0.00**	**+549,992.86**	**+4.1**