



Prioritising benefits of riparian vegetation: An importance-performance analysis

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Benefits of riparian vegetation

- Riparian zone: the interface between aquatic and terrestrial ecosystems
- Support a distinctive flora
 - Fulfills or influences various important ecological functions and provide diverse benefits
 - Provision of food
 - Moderation of stream water temperature
 - Buffer zone that filters sediments and controls nutrients
 - Stabilization of stream banks



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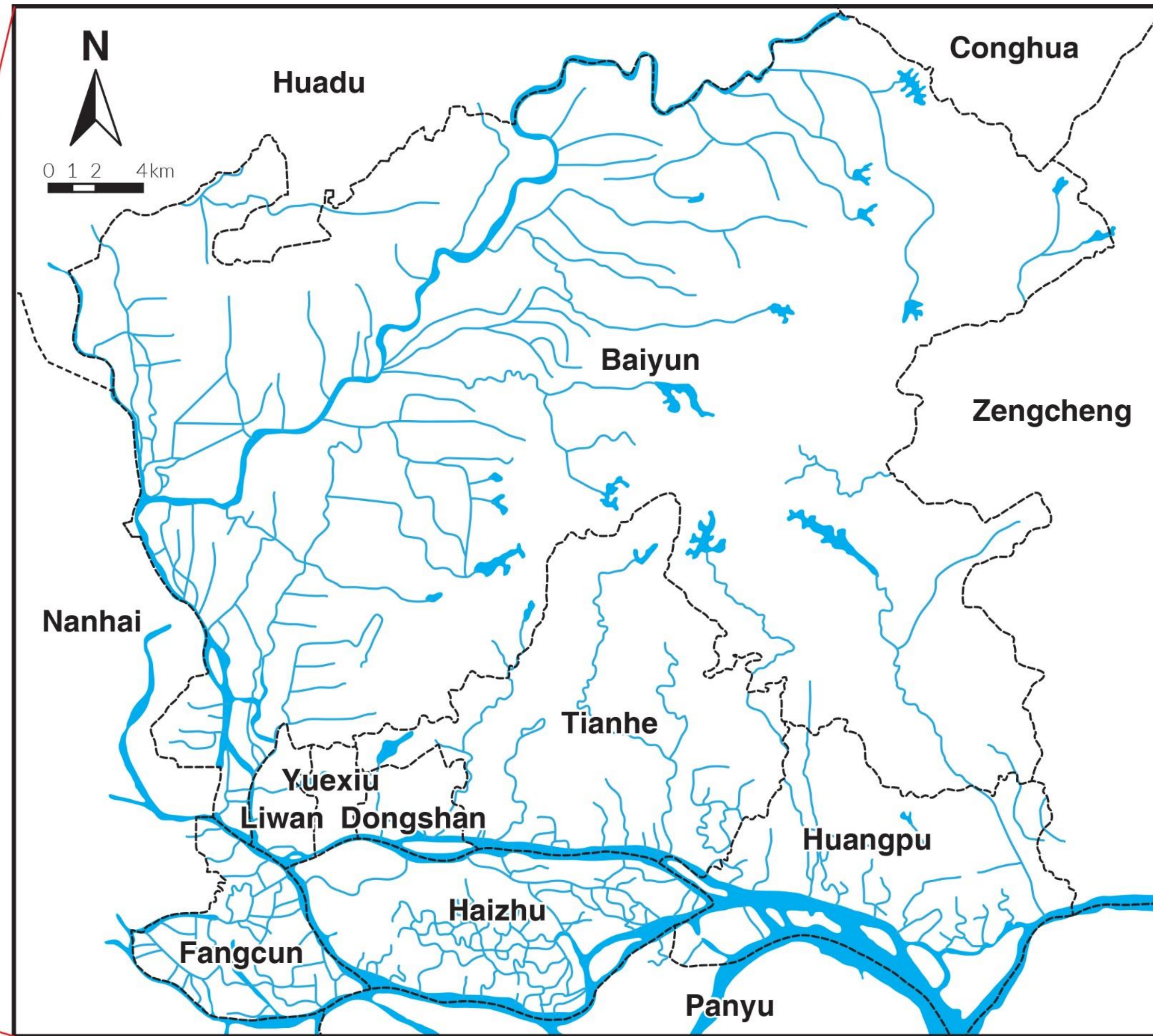
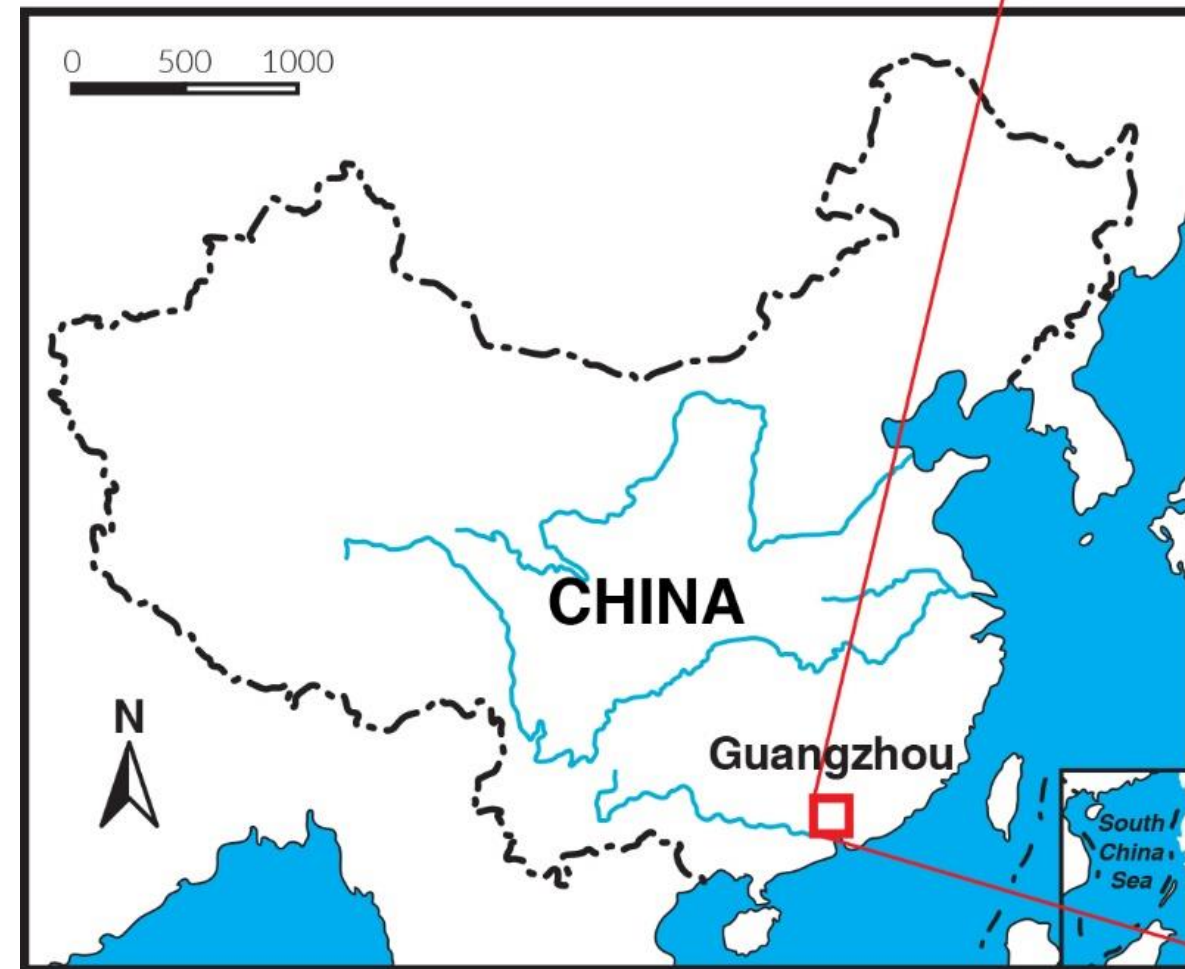


Research questions

- How do citizens perceive the importance of urban riparian vegetation's benefits?
- How do people perceive the provision performance of those benefits?



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- Importance-performance analysis
 - Customers' satisfaction is resultant from a preference (perceived importance) of a service and relevant judgment of its performance



Code	Abbreviation	Statement
1	BIODIVERSITY	Urban rivers offer important natural habitats for diverse floral and faunal species
2	IDENTITY	Urban rivers represent the identity of the city and local communities
3	PURIFICATION	Urban rivers help to purify water pollutants
4	FLOODCONTROL	Urban rivers can mitigate floods
5	EDUCATION	Urban rivers serve as field laboratory for public to learn about natural environment
6	WATERSUPPLY	Urban rivers supply fresh water for multiple uses
7	BUSINESS	Urban rivers promote business development (such as river-related tourism)
8	RECREATION	Urban rivers provide many recreational opportunities
9	NAVIGATION	Urban rivers are used for transporting goods and people
10	HERITAGE	Urban rivers are important cultural and historical heritage
11	COOLING	Urban rivers alleviate high temperature in summer
12	AMENITY	Urban rivers represent natural beauty and aesthetics



Ecosystem services		Importance		Performance		Gap	<i>p</i>
		Mean	Std. Dev.	Mean	Std. Dev.		
1	BIODIVERSITY	3.887	0.787	3.389	1.167	-0.498	0.000
2	IDENTITY	3.887	0.800	3.371	1.081	-0.516	0.000
3	PURIFICATION	4.320	0.709	3.349	1.105	-0.971	0.000
4	FLOODCONTROL	4.066	0.761	3.666	1.049	-0.400	0.000
5	ENVI-EDU	3.913	0.769	3.422	1.024	-0.491	0.000
6	WATERSUPPLY	3.644	0.987	3.298	1.161	-0.346	0.000
7	BUSINESS	3.491	0.922	3.455	1.084	-0.036	0.645
8	RECREATION	3.855	0.851	3.684	1.073	-0.171	0.029
9	NAVIGATION	3.342	1.011	3.149	1.207	-0.193	0.011
10	HERITAGE	3.949	0.861	3.949	0.969	0.000	1.000
11	COOLING	3.956	0.768	3.560	1.067	-0.396	0.000
12	AMENITY	3.996	0.790	3.647	1.102	-0.349	0.000
Overall		3.859	0.535	3.495	0.826	-0.364	0.000
F1	Cultural	3.915	0.605	3.608	0.892	-0.307	0.000
F2	Environmental	4.064	0.576	3.499	0.847	-0.565	0.000
F3	Economic	3.492	0.820	3.301	0.996	-0.192	0.003



- Overall, the importance rating (3.86) is greater than the performance rating (3.49)
- Heritage value: highest performance score
- Water purification: highest importance score
- Residents are primarily not satisfied with the provision of environmental-related services
- All residents have similar attitudes towards the importance of urban rivers' benefits, local residents tend to have higher expectations, and they are more dissatisfied about the provision performance than non-local residents



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Thank you!