

# The Spatial Distribution Dataset of 312 Renowned Historical and Cultural Towns and Scenic Spots in China

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**Abstract:** There are 312 renowned Chinese historical and cultural towns in total evaluated and published by Ministry of Housing and Urban-Rural development and National Cultural Heritage Administration in successive 7 batches from 2003 to 2019. Covering 31 provinces, autonomous regions and centrally administered municipalities, those renowned towns are endowed with great historical and cultural values, which mainly remains in scenic spots in town areas. Referring to the Baidu Map and images from Google Earth, authors have identified and located the location of renowned towns and their major scenic spots respectively based on the lists of renowned towns as the original information sources and signature landmarks and building roofs as identification objects. The spatial distribution dataset of 312 Chinese renowned historical and cultural towns and scenic spots was then obtained, which included the location data of 312 renowned towns and those of major scenic spots in renowned towns. The dataset was archived in .shp and .kmz formats with the data size of 1.48 MB in 16 data files (compressed to 114 KB in 3 data files).

**Keywords:** historical culture; renowned towns; spatial distribution; location of towns; location of scenic spots

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## Dataset Availability Statement:

The dataset supporting this paper was published and is accessible through the *Digital Journal of Global Change Data Repository* at: <https://doi.org/10.3974/geodb.2022.03.04.V1> or <https://cstr.escience.org.cn/CSTR:20146.11.2022.03.04.V1>.

## 1 Introduction

The history of China, which also stands as the history of people's struggling for abundant material fortune and harmonious co-existence with nature, has left profound teeming cultural thoughts and life scenes that can pass through the long history in everywhere. The renowned historical and cultural towns (hereinafter referred to as "renowned towns") precisely demonstrate those scenes of history. The "town" is the political and cultural center of one

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certain area, and a safeguarding force to protect the local economy and livelihood. Since the unique treasure of towns make them famous and characteristic, the renowned towns can see their value not only in the entity of historical scenic spot, but the deposition of cultural consciousness much more. The remained value of renowned towns, difficult to be measured by money, needs more prompt scientific and reasonable conservation strategy and corresponding construction approaches implemented. Under such a circumstance, a data-based approach is an undoubtedly secure way to protect the value.

The spatial distribution dataset of 312 renowned historical and cultural towns and scenic spots in China is developed based on series of spatial distribution of traditional villages<sup>[1,2]</sup>. By virtue of this dataset, the affiliation between towns and superior administrative branches can be clearly sorted out, and the location of towns and scenic spots can be griped in space swiftly, which is conducive to the promotion of renowned towns and conservation of outstanding cultures of the towns (Figure 1).

2 Metadata of the Dataset

Detail information of the Spatial dataset of 312 historical and cultural towns and scenic spots in China<sup>[3]</sup> is summarized in Table 1, which covers its full name, authors, geographic region, data of years, dataset composition, data publisher and sharing service platform, data sharing policies, etc.



**Figure 1** Conservation and restoration of relics in renowned towns, Hadapu town, Tanchang county, Gansu province (the second batch, photographed by Yuliang in 2020 )

**Table 1** Metadata summary of the Spatial dataset of 312 historical and cultural towns and scenic spots in China

Items	Description
Dataset full name	Spatial dataset of 312 historical and cultural towns and scenic spots in China
Dataset short name	TownsScenicSpotsChina312
Authors	Yu, L. F-8099-2018, School of Architecture, Soochow University, yuliang_163cn@163.cn Qiu, Y. C. ABH-5207-2020, School of Architecture, Soochow University, 75284315@qq.com Tang, M. J. O-6467-2018, School of Architecture, Soochow University, 361988267@qq.com Fu, M. O-6455-2018, School of Architecture, Soochow University, 821064405@qq.com Han, S. AFS-0416-2022, School of Architecture, Soochow University, 2812209760@qq.com Liu, Z. T. ABH-4639-2020, School of Architecture, Soochow University, 785025073@qq.com
Geographical Region	China,covering 31 provincial administration regions (no data from Hong Kong, Macao and Taiwan)
Year	2003–2019
Data files	2 files (Town&ViewSpot China312.kmz + Town&ViewSpot China312.rar)
Data publisher	Global Change Research Data Publishing & Repository, <a href="http://www.geodoi.ac.cn">http://www.geodoi.ac.cn</a>
Address	No. 11A, Datun Road, Chaoyang District, Beijing 100101, China
Data Sharing Policies	<b>Data</b> from the Global Change Research Data Publishing & Repository includes metadata, datasets (in the <i>Digital Journal of Global Change Data Repository</i> ), and publications (in the <i>Journal of Global Change Data &amp; Discovery</i> ). <b>Data</b> sharing policy includes: (1) <b>Data</b> are openly available and can be free downloaded via the Internet; (2) End users are encouraged to use <b>Data</b> subject to citation; (3) Users, who are by definition also value-added service providers, are welcome to redistribute <b>Data</b> subject to written permission from the GCdataPR Editorial Office and the issuance of a <b>Data</b> redistribution license; and (4) If <b>Data</b> are used to compile new datasets, the ‘ten per cent principal’ should be followed such that <b>Data</b> records utilized should not surpass 10% of the new dataset contents, while sources should be clearly noted in suitable places in the new dataset <sup>[4]</sup>
Communication and searchable system	DOI, CSTR, Crossref, DCI, CSCD, CNKI, SciEngine, WDS/ISC, GEOSS

3 Data Research and Development

The published lists of renowned towns contain some information such as their names rather than their spatial location. By identifying the names of renowned towns and shapes of spatial objects, the spatial data of renowned towns can be obtained. Then after extracting the

location data of towns, the affiliation between towns and superior branches can be drew, which would be included into their respective data columns.

3.1 Data Sources

(1) Concept of renowned towns: the historical and cultural villages and towns refer to the towns and villages with abundant cultural relics and important historical value or revolutionary significance. Back to 2003, the Announcement of Renowned Historical and Cultural Towns and Villages in China published by Ministry of Housing and Urban-Rural development and National Cultural Heritage Administration raised the concept of renowned historical and cultural towns and villages at the first time<sup>[5]</sup>, namely, “towns and villages selected from the country, endowed with abundant cultural relics and important historical value or revolutionary significance, which can reflect traditional landscape and local national characteristics of some certain periods of history, will be published in stages and in batches as the renowned Chinese historical and cultural towns and villages”.

(2) Data of renowned towns: data shows that there are 312 renowned historical and cultural towns in China, which covers 31 provincial administration regions without Hong Kong, Macao and Taiwan. 10 renowned towns were released in the first batch in October, 2003, and the seventh batch in January of 2019 disclosed 60 renowned towns. Seven batches in 16 years saw a remarkable augment in quantity, in which the seventh batch was 6 times more than the first batch with an average increase of 71%. Yet different provinces held uneven distribution. In all renowned towns released in seven batches, Jiangsu and Sichuan province had the largest quantity, both reaching 31. And the two provinces accounted for 19.9% of the total quantity, while Ningxia autonomous region had zero (Figure 2).

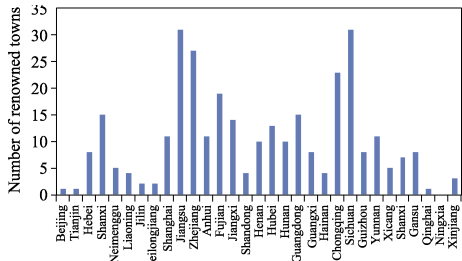


Figure 2 Renowned historical and cultural towns in China

3.2 Data Processing

(1) Data hypothesis: a renowned town is consisted of the town body and town area. The body refers to the objects within the town, which can be further described in terns of the status, shape, layout, etc. For town area, it defines the spatial area for the development of objects and with physical traces moreover that are convenient to be captured. That is the basis of researching and developing the point data, namely, recognizing the trace of certain objects within the appropriate space. The town stands as a part of administrative system and occupies a certain area in space. As for town area, composed of villages and markets of different scales (assuming the town has the market for commodity circulation and residential area), is the targeted area in this research, while the town body is mainly non-agricultural population.

(2) Data focuses: boundary, scenic spot, impact point and scenic feature. The boundary means the town area where objects develop. The scenic spot defines the area where objects have the best development that is most worthy commemorating. The impact point means it can easily follow and summarize the characteristic scenic feature by tailing after the point, which stands as the feature spot of the major scenic feature.

Since the point is amorphous with small storage capacity, it can be utilized to summarize and mark the signature surface feature in space and on the earth especially by coordinating it with surface and solid. As the consequence, identifying the scenic feature in scenic spot by image data, and then identifying the impact point by point. This process substantially meets the demand of swiftly marking the major scenic feature in scenic spot. The four focuses above are interconnected with progressive relationship. The former is the fundamental and condition of the latter, while the latter is the result of the former.

The scenic spot is a gathering area for non-agricultural population, consisted of buildings, roads, open spaces, rivers and green lands, etc. Among all the components, buildings are the



According to Regulations on Administration of Administrative Division, the major adjustments include county upgraded to city, county (city) upgraded to district, district combination, etc.<sup>[10]</sup>, which shows a great feature of urbanization. For instance, Yacheng town, Sanya, Hainan (town upgraded to city) and Xin’ansuo town, Mengzi, Honghe Hani autonomous prefecture (county upgraded to city). Adjustments models below the county-level contain village upgraded to town, village-town combination, etc. Examples go as follows, Anchang town in Keqiao district, Shaoxing, Zhejiang province now is converted to Anchang community. Co-existence of multiple administrative divisions is conducive to the development of urbanization in different cities across China, and comprehensive regional development in terms of economy, politics, society and culture additionally. There are 16 renowned towns upgraded in the first list review, accounting for about 5% of the total (Table 2).

**Table 2** Summary of administrative division adjustment

Region	Adjustment model	No.	Town name	Batch	Original division	Current division	Number
Urban	Town upgraded to city	69	Yacheng town	3	Yacheng town	Yazhou district	1
	County upgraded to district	113	Zhuxian town	4	Kaifeng county	Xiangfu district, Kaifeng	4
		119	Jinggang town	4	Wangcheng county	Wangcheng district	
		236	Wenquan town	6	Kai county	Kaizhou district	
		243	Hengjiang town	6	Yibin county	Yibin district	
	County upgraded to city	178	Xin’ansuo town	5	Mengzi county	Mengzi	3
		244	Yunding town	6	Longchang county	Longchang	
		247	Gaojiapu town	6	Shenmu county	Shenmu	
		153	Dangkou town	5	Dangkou town	Ehu town	1
	Village-town combination						
Town	Town converted to community	20	Anchang town	2	Anchang town	Anchang community	7
		50	Chunxi town	3	Chunxi town	Chunxi community	
		53	Dongpu town	3	Dongpu town	Dongpu community	
		98	Jiading town	4	Jiading town	Jiadingzhen community	
		131	Enyang town	4	Enyang town	Dengke community	
		157	Hexi town	5	Hexi town	Hexi community	
		201	Xiping town	6	Xiping town	Xiping community	
		In total					16

The second aspect is text phonetic notation. VLOOKUP Function in Excel was used in the complete lists to check and match the attribute columns such as “ProvinceCN”, “CityCN”, “DistrictCN”, etc. Then the administrative hierarchy was corresponded to the respective name. As for Chinese phonetic notation, shortcut plugins of Excel such as “Pinyin Conversion” and “Capitalization” were used to conduct process and review. Other approaches such as water system within and outside the town, traffic direction and organization methods of other elements have also been used to better conduct positioning, enhance the relations between names and location points, and gradually decrease the administrative hierarchy to approach the positioning area. Taking Taiping town, Gulin county, Luzhou, Sichuan province and Luzhou, Sichan province as an example, both of them are easy to locate with obvious town area. It is difficult to distinguish the location of scenic spot, however. Maps show that the scenic spot is near to the corner of Gulin river. By virtue of river’s direction, the location of scenic spot can be finally confirmed. Besides, the town name itself contains some meanings related to water, wharf and historical events, which can verify the status quo of military campaigns and revolutionary historical areas (Table 3). The number of the last attribute table of renowned towns is ranked according to the publish order of the lists. Different administrative affiliations are included in respective columns of the table, demonstrating four administrative hierarchies.

**3.4 Positioning of Town**

From town to county, city and then to province, there are four administrative hierarchies in total. After finishing the preliminary positioning in Baidu Map on the basis of information

from the lists, Google Earth is used to obtain the spatial point. Identification of spatial shape characteristics of town body and town objects is conducted then, while stress is put on the hierarchy differences. In administrative hierarchy, the town is one level higher than village being extracted previously. Despite that both town and village highlight the lives of people, they do have differences in essence. A town is usually endowed with scenes of people’s lives as well as markets for transactions, which demonstrates that the space of renowned towns is rich in types and ranges.

**Table 3** Meanings and characteristics of typical town names

No.	Meanings of town name	Feature words
1	①Water; ②Wharf (or transportation hub); ③Agricultural products, industrial craftsmanship	①“Tang, Tan, Jiang, Tuo, Quan, Xi, Wan, He, Gou, Luo, Jing, Tan, Hu, Ze, Du, Shui, Zhu” ②“Gang, Hekou, Yiqian” ③“Yetao, Yanguan, Futian, Zhoutie, Bencha”
2	Divisions where ethnic minorities live	Xinbin Man autonomous county, Jiuyang Tujia and Miao autonomous county, Harqin Banner, Yehe, Wulajie town, Songtao Miao autonomous county, Guangxi Zhuang autonomous region, Jingning She autonomous region, Xunhua Sala autonomous region
3	Significant historical event, combat and revolutionary historical area	Gutian, Zhoulaozui, Qiliping, Niangziguan, Shajiabang, Tingsiqiao
4	Quite familiar with	Maotanchang, Xinghuacun town, Dawenkou town

To maintain its normal operation, the town is equipped with numerous and multiple kinds of surface feature facilities, which makes a stark contrast with village that is lack of richness in image, graph and scale. Adequate historical and cultural buildings of small volume can be seen in scenic spots of towns with regular shapes and comparatively darker roof in orthographic projection. It makes it much easier to distinguish and then locate the scenic spots and scenic features thanks to the sharp contrast between those buildings and other surface features in terms of location, shapes and sizes. Consequently, the analysis of combination and protection status between renowned towns and building entity space can be conducted. As for town body and town area, while some certain scales and information can be obtained from related department<sup>[11]</sup>, information does not cover the scenic spots, which stands as the main reason why data of scenic feature need to be acquired in images.

To conduct analysis on positioning operation, it needs make the judgment BMY the regularity of the whole image based on the priority of scenic spots and scenic features as well as their corresponding location. To make is more easy and convenient for marking points, two principles are adopted in positioning. The first is targeted at the regular-shaped scenic spots within the town area, which is obviously different with surrounding scenery. Under such circumstance, the point in on the geometric center of the entire scenic spot. As demonstrated in Figure 4, Zhouzhuang town, Kunshan, Jiangsu province and Qiantong town, Ninghai county, Ningbo, Zhejiang province.

The second principle can be



**Figure 4** Conspicuous difference between town areas (Left: Zhouzhuang town, Kunshan, Jiangsu; Right: Qiantong town, Ninghai county, Ningbo, Zhejiang)



**Figure 5** Less conspicuous difference between town areas (Left: Tingsiqiao town, Xianning, Hubei province (the fourth batch); Right: Runcheng town, Tangcheng county, Jincheng, Jiangxi province (the fifth batch))



applied to those scenic spots that are difficult to distinguish. They usually have numerous types of buildings, novel roofs, and different combinations of scenic spots and scenic features in small scale which form the landscape with conspicuous order. Positioning means selecting the important scenic features as the scenic spots being positioned, namely, the significant scenic features famous for their profound history and culture and other unique backgrounds. To choose those satisfactory scenic features, assessment by institutions at different level (such as national titles, cultural relics under protection)<sup>[12-14]</sup>, research and analysis on materials and social reputation can be served as the reference<sup>[15,16]</sup>. On the left of Figure 5 is Tingsiqiao town, Xianning, Hubei province with several scenic features. Among all of them, the site of Tingsi Bridge Battle in the Northern Expedition, a key cultural relic under protection, is of the most significance, explaining why the positioning point lies here. On the right of Figure 5 is Runcheng town, Jincheng, Jiangxi province with multiple scenic features such as Tianguang Palace and Dongyue Temple, yet Diji city stands as the positioning point since it is the key cultural relic under national protection released in the sixth batch.

Table 4 demonstrates there are three models of boundaries of different positioning points,namely, conspicuous, inconspicuous and mediocre with respective quantity of 235, 63 and 14, accounting for 75.3%, 20.2% and 4.5%. The model of inconspicuous has the largest proportion and the proportion of mediocre-model is less. As for the positioning points of scenic spots, the positioning quantities of geometric center and priority scenic spots are 233 and 79 respectively, accounting for 74.7% and 25.3%. Results above show that positioning type of conspicuous boundaries makes up a majority.

**Table 4** Quantity of renowned towns and their proportion under different positioning principles

Positioning perspective	No.	Characteristics of object	Quantity of renowned towns	Proportion (%)
Boundary	1	Conspicuous	235	75.3
	2	Inconspicuous	63	20.2
	3	Mediocre	14	4.5
	Total		312	100
Scenic Feature	1	Geometric Center	233	74.7
	2	Priority Scenic Feature	79	25.3
	Total		312	100

4 Data Results

4.1 Composition of Dataset

The dataset is composed of two subsets, namely, a version of ArcGIS .shp and a version of Google .kmz of the Spatial distribution dataset of 312 renowned historical and cultural towns and scenic spots in China (the names are Town&ViewSpot China312.kmz and Town&ViewSpot China312.rar respectively). There are 16 data files with the size of 1.48 MB, which is compressed to 2 files with the sized of 113 KB. The subsets consist of two sets of point data marked as the location of towns and scenic spots. These two sets are different from each other while also share common relations, and they can be linked by the form of library and served as source sheet and target sheet. Through Data.mdb, the sets of data can be summarized.

4.2 Data Result

Data of renowned towns cover 31 provinces, cities and autonomous regions. The distribution of points shows an uneven pattern of integration or dispersion in space. Most of the renowned towns are in the southeast, especially in the Yangtze River Delta region with 80 renowned towns. The second-densest area is Sichuan Basin, mainly the plains and hills in the southeastern Sichuan and hills in southwestern Chongqing. Many of renowned towns are also located in the junction of Shanxi, Hebei and Henan, central Hubei, southern Anhui, Zhejiang, Fujian, and eastern Jiangxi. As for Xinjiang in the northwest and Heilongjiang in

the northeast, they both has the least renowned towns.

Moreover, the renowned town do have eight kinds of historical values and features including culture, economy and trade, revolutionary history, military affairs, etc, which in fact coexists rather than exists alone. Based on the principle of relational similarity, the eight kinds of historical values and features are summarized to five kinds in this research. In 312 renowned towns, 275 belong to cultural class, 80 belong to commercial and transportation class, 59 are building ruins and national characteristics, and 17 are ecological and environment protection class. The classification above is a brief summary of data. As a matter of fact, further researches can be conducted on spatial distribution feature of renowned towns based on the spatial point data. It can be firmly believed that researches and application of the data go beyond far more than that.

### Author Contributions

Yu, L. made an overall design for the acquisition and development of datasets, and wrote data thesis; Qiu, Y. C. and Tang, M. J. organized and verified the key data; Han., S., Fu, M., and Liu, Z. T. conducted the processing of data locating.

### Conflicts of Interest

The authors declare no conflicts of interest.

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