

Research on the Image Building of the Typical City and Ancient Town in the Southern China from the Perspective of Water Culture

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1 Research on the Image Building of the Typical City and Ancient 2 Town in the Southern China from the Perspective of Water 3 Culture

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6 **Abstract:** With the rapid development of the economy and the acceleration of urbanization in
7 China, the characteristics of traditional ancient towns are gradually assimilated by modern culture.
8 Image is the characteristics and individuality of cities and ancient towns. Image building has also
9 become an important means to enhance urban competitiveness, protect the characteristic culture of
10 ancient towns and develop tourism in ancient towns. This research takes Changsha city and
11 Jinggang ancient towns as examples, and based on physical water culture, behavioral water culture
12 and spiritual water culture, which are analyzed and compared from the perspective of figuration
13 and imagery. The results show that the water culture's visualization has similar and different of
14 these two places. The similarity is reflected in the obvious spatial development structure and
15 derived water culture of the places. The differences are reflected in the following aspects:
16 (1) Changsha city's natural water landscapes such as scenic spots along the river, islands and
17 scenic spots, ecological leisure parks, etc. Jinggang Ancient Town is dominated by temples,
18 ancient theaters and other cultural attractions. (2) There are many ports, navigation junctions and
19 modern water conservancy establishments in Changsha; Jinggang ancient town are well preserved
20 about the ancient quay and other ancient water conservancy establishment. (3) Changsha City
21 presents the urban spirit of "being the first and keeping the world in mind". Jinggang Ancient
22 Town believes in "Water God". Combining the similarities and differences between the water
23 cultural visualized of Changsha and Jinggang ancient town, it is proposed that Changsha should
24 pay attention to protecting the water cultural heritage, Jinggang ancient town need to create natural
25 water landscapes, and both regions need to increase water cultural activities. The suggestion
26 provided reference for similar water culture building visualize of cities or ancient towns.

27
28 **Keywords:** water culture; image building; Comparative study ;Changsha City; Jinggang Ancient
29 Town

31 Introduction

32 Water culture is the related culture formed by human in the process of contacting with using
33 water., managing water and other processes, then have a knowledge and thinking about water,
34 which gradually formed a culture. Different experts and scholars have different understandings
35 about the definition and connotation of water culture. In the study of the relationship between
36 water culture and water conservancy culture, Mao Chunmei and her teams believed that water
37 culture is a water-centered cultural complex that is represented by the summation of various
38 materials, spirits, systems and behaviors with water as the carrier ^[1]. Meng Yaming and his teams
39 hold that the emergence of water culture is due to the connection between people and water, which
40 the creation of water management and water through the reflection of water, and to position the

41 water culture from the perspectives of science, industry, and society ^[2]. In summary, water culture
42 can be understood as the sum of the wealth of materials and spiritual wealth which is carried by
43 water in the process of water-related production.

44 A discussion of the meaning of "image", Kevin Lynch discusses the visual quality of
45 American cities from the psychological impression of people in the book "The Images of the City",
46 considering that images are specific shapes or gestures that can cause people's thought or
47 emotional activity ^[3]; Wen Jiangan understood the image as the expression of phenomenon and
48 essence, and believed that it was mainly perceived through human vision, and was
49 comprehensively processed by the human brain ^[4]. There are many researches on the image of the
50 city and the image of ancient towns in geography. Liu Song divides the image of the city into a
51 physical image and a feeling image. He believes that the city image includes the political,
52 economic and impression of the public on the city ^[5]; in the image design of the ancient town, Qi
53 Gaoxiang understood the image of the ancient town from two aspects: "figurative" and "abstract".
54 He thought that the image of the ancient town was an objective existence and subjective social
55 evaluation ^[6]. Comprehensive research on "image", "urban image" and "ancient town image"
56 shows that the image (city, ancient town) mainly contains the objective existence of things and
57 people's evaluation. Therefore, the image of the city and the image of the ancient towns in this
58 study can be understood from the aspects of figuration and imagery. The figurative level of the
59 image of the city and the towns refers to the external environment that human can directly
60 perceive, such as the form, architecture, roads and landscaping of the city. As well as the natural
61 environment, morphological structure, and traditional architecture of ancient town building. The
62 image level of the image of the city and the ancient town is its unique culture and connotation, for
63 example the city's urban spirit, citizen quality, morality; the folk customs, clan relations, and living
64 habits of the ancient towns.

65 As for the study of image, the earliest foreign countries were in the ancient Greek and Roman
66 period. Vitruvius mentioned in Architectural Ten Book that aesthetic significance and value should
67 be emphasized in urban planning and architectural design ^[7], which can be regarded as an early
68 narrative of urban image; by the end of the 19th century, the urban beautification movement in the
69 United States further. Promoted the development of urban image; the concept of urban image was
70 also first proposed by Kevin Lynch in the book "The Image of the City".

71 The sprout of the city image of our country was born around the beginning of the 20th
72 century, when people began to pay attention to the importance of beauty to cities. In 1928, Chen
73 Zhizeng wrote in "Oriental Magazine" that beauty is as important as urban life, especially in
74 capital cities. It should work harder to improve its appearance and appearance so that it can catch
75 up with famous cities around the world ^[8]. With the continuous development and deepening of
76 urban aesthetics and other related theories, the concept of urban image was clearly put forward in
77 the early 1990s.

78 At present, the research on city image is mainly based on three aspects: First, the city image
79 is studied from specific perspectives, such as in tea culture ^[9], folk culture ^[10], and diet culture ^[11].
80 The second is to study the dissemination media and current status of city image. The third is to
81 take individual cities as research objects, and specifically study the measures to shape or
82 disseminate their cities. The research on the image of the ancient towns mainly focuses on the
83 design of the visual image of the ancient towns ^[12] and the design of the tourist image ^[13]. For
84 example, Wang Ning carried out a new and overall planning and design of the visual image of

85 Xidi Town in Anhui Province. And publicity ^[14], building a brand visual image with local
86 characteristics of Xidi Town.

87 Comprehensive research on the image of the city and the image of the ancient towns, most of
88 the research objects are single subjects (city or ancient towns). Few studies focused on the two
89 different subjects of the city and the ancient towns. Research on image building of towns is also
90 less. Therefore, this study selects two different subjects, Changsha City and Jinggang Ancient
91 Town in Hunan province of the south China, and intends to analyze the concrete and imagery
92 images of Changsha City and Jinggang Ancient Town from the perspective of a specific angle
93 (water culture). The characteristics of the figurative and imagery of Changsha and Jinggang
94 Ancient Town, and based on this, we propose countermeasures to shape the image of Changsha
95 and Jinggang Ancient Towns from the perspective of water culture, and try to provide
96 development for Changsha and the protection and development of Jinggang Ancient Town new
97 ideas and perspectives.

98 **1 Research area overview and research methods**

99 **1.1 Overview of the study area**

100 Changsha City of Hunan Province is located in the south of China and downstream of the
101 Xiangjiang River in the Yangtze River watershed. It is a transition zone from the hilly basin in
102 central Hunan to the plain of Dongting Lake ^[15]. The river network in Changsha is dense and the
103 river system is developed. The Xiangjiang River flows from south to north. In addition to the
104 Xiangjiang River in the territory, there are 15 tributaries that merge into the Xiangjiang River,
105 such as Liuyang River and Jinjiang River. Due to the convenience of water transportation of the
106 Xiangjiang River, Changsha was developed mainly as a water transportation terminal and a
107 commercial port. From the Chu and Han to the Ming and Qing Dynasties, Changsha's economy
108 was mainly dominated by grain, tea, textiles, and retail and wholesale of goods. With Xiangjiang
109 as the main waterway, Changsha has become the province's shipping hub ^[16].

110 Jinggang Ancient Town is a traditional ancient town in Wangcheng District of Changsha City.
111 It is located in the delta area where Lishui merges into the Xiangjiang River, reaches Wuhan,
112 reaches Changsha, and has excellent water transportation conditions. Most of the goods in the
113 vicinity of the ancient town are transported by this waterway. During the Ming and Qing dynasties,
114 the ancient town of Jinggang relied on wharf freight to make the economy develop rapidly. By the
115 middle of the Republic of China, Jinggang was the prosperous three towns of Hunan Province
116 with Jinshi and Hongjiang, with the name of "Little Hankou" ^[17]. After the liberation, the
117 government adopted river dams and dams to control floods, so that the diversion of diversion
118 water and the ancient town of Jinggang have since lost superior water transportation conditions.

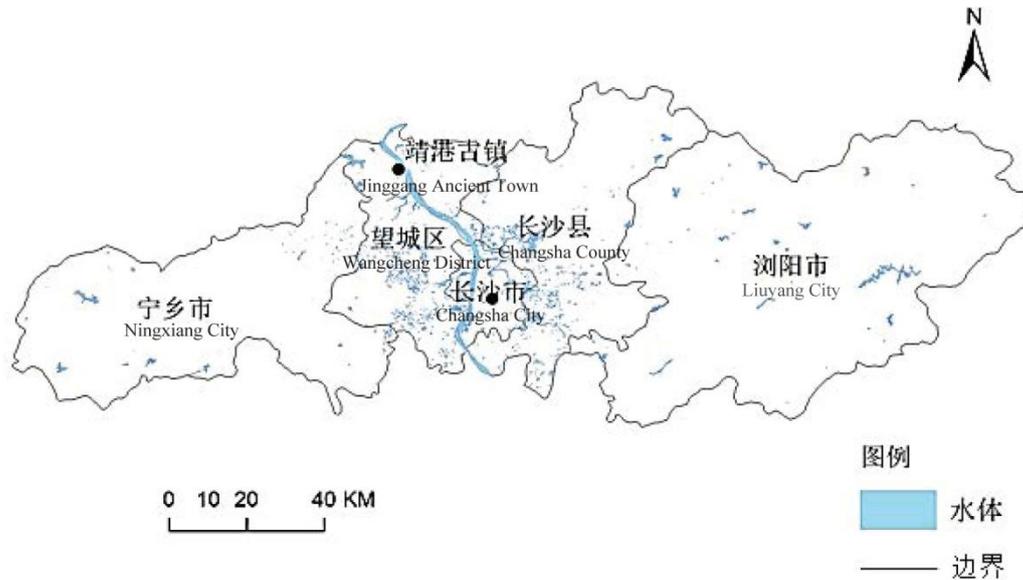


Figure 1 Location of Jinggang ancient town in Changsha city

1.2 Research Methods

(1) Literature analysis method: comprehensively collect and statistics the theoretical literature related to the research of water culture and the image of the city or the image of ancient towns, summarize the characteristics and research directions of the literature research, and use it scientifically as a theoretical reference and guidance tool.

(2) Inductive summary method: Based on the literature review, analyze the obtained data and further systemize it, and summarize the concrete and image images of Changsha and Jinggang ancient towns under the perspective of water culture, and summarize the Changsha city. The characteristics of the figurative and imagery of Jinggang Ancient Town.

(3) Case analysis method: Selecting Changsha and Jinggang Ancient Towns as cases to study their image building from the perspective of water culture can provide inspiration for similar cities or ancient towns.

(4) Comparative analysis method: By comparing the image and image characteristics of typical cities and ancient towns in Hunan Province from the perspective of water culture, we can clearly understand the similarities and differences between the water culture images of cities and ancient towns, and draw lessons from their image-building experience.

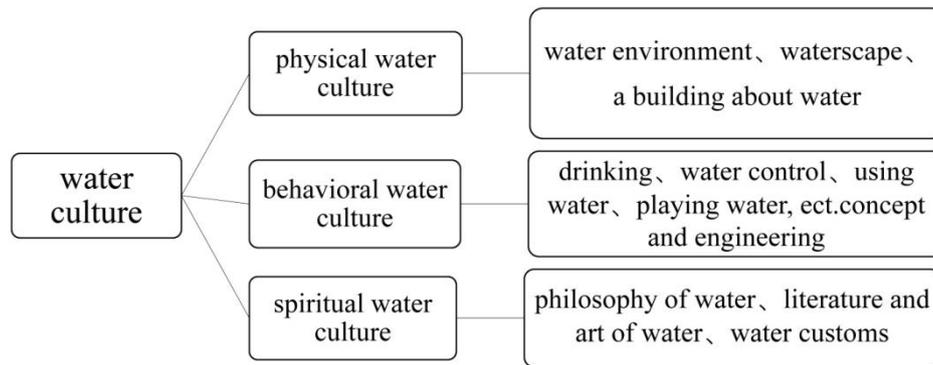
2 Images of Changsha and Jinggang Ancient Town from the Perspective of

"Water Culture"

2.1 Classification of water culture

Water culture is the sum of the material wealth and spiritual wealth generated by human beings in carrying out water-related production activities. In this study, water culture is divided into physical water culture, behavioral water culture, and spiritual water culture from the "cultural" level (Figure 2); "physical water culture" means that human beings produce water-related production activities. Material production activities and their products, "behavioral water culture" is the culture of people's attitudes to water, etc. in their production and life, and "spiritual water culture" refers to the unique human beings generated by humans in the production

147 of water ideological collection ^[18].



148
149 Figure 2 Classification of water culture
150

151 **2.2 Image of the research area from the perspective of water culture**

152 Through a large collection of literature and related data, this study extracts the concrete
153 images and image images of Changsha and Jinggang ancient towns from three aspects: physical
154 water culture, behavioral water culture and spiritual water culture (Table 1). The presented water
155 culture concrete image and image explore the characteristics of the respective water culture image
156 and the similarities and differences between the two water culture images. The concrete image of
157 the study area is mainly reflected in the physical water culture and behavioral water culture, while
158 the image image is reflected in the spiritual water culture. Physical water culture includes the
159 water environment, water landscape, and spatial structure of the study area, such as the main rivers
160 and lakes in the study area such as Xiangjiang River, Huangshui, Yanghu, and Tuantou Lake, as
161 well as the riverside scenery belt, Changzhou and the more famous landscapes and buildings such
162 as the Ziyun Palace in Jinggang Ancient Town. The behavioral water culture is mainly water and
163 water treatment facilities in the research area. Changsha has both the historic Baisha Ancient Well
164 and the large-scale facilities such as Changsha Port and Xiangjiang Bridge developed by modern
165 urban development. Jinggang Ancient Town is mainly preserved. Ancient quay and embankment.
166 Spiritual water culture includes water customs, derivative water culture, water beliefs, and water
167 spirits in the study area. Water customs and water beliefs are mainly reflected in traditional
168 activities such as the Dragon Boat Festival in Jinggang Ancient Town and the June 6 temple fair of
169 Ziyun Temple. "Water god" belief, the derivative culture of water includes the well culture of
170 Changsha City, the embankment culture and the dock culture of the ancient town of Jinggang.

171
172 Table 1 Water culture image of Changsha and Jinggang Ancient Town

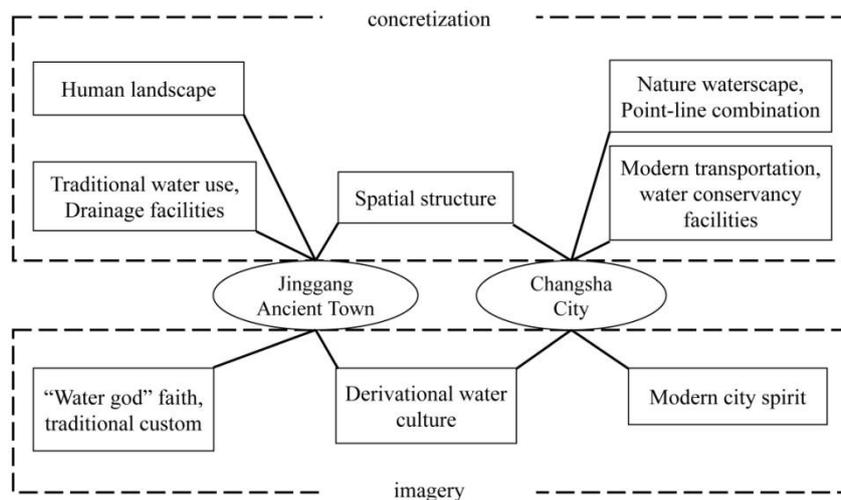
Image	Water culture	Changsha city	Jinggang Ancient Town
concretization	Water environment	Xiangjiang river、 liuyang river、 yanghu lakes	Xiangjiang river、 Weishui river、 Tuantou lakes,etc.
	physical water culture	Scenic belt along river、 yanghu wetland、 juzizhou, etc.	Linghe opera、 Ziyun palace(Yangsi temple), etc.
	Spatial structure	“one axis, two bands with multi-center; one center, two supportive sectors, five groups”	“eight streets, four alleys, seven quays”

imagery	behavioral water culture	Use water、 Drainage facilities	Baisha ancient well、 Changsha wharf、 Xiangjiang bridge、 Xiangjiang navigation-power junction	Miaowuan wharf、 Xinongdi wharf
	Spiritual water culture	Derivational water culture	Well culture	Diwan culture、 wharf culture
		Water custom		Dragon boat race、 Ziyun palace's temple fair
		Water faith/water spirit	Changsha city spirit “ Dare to be the first to have the world”	“water god” faith、 general Yangsi

173

174 **2.3 Image characteristics and analysis of research area from the perspective of water culture**

175 This research compares the water cultural representational imagery with the imagery image
 176 presented by Changsha and Jinggang Ancient Town (Tab.1) . The water culture images of the two
 177 places not only reflect similarities, but also have large differences. The figure below summarizes
 178 the similarities and differences between the concrete and imagery images of water culture in the
 179 two places (see Figure 3). The middle column indicates the similarity of the water culture images
 180 of Changsha and Jinggang Ancient Town, and the left and right columns indicate Differences in
 181 water culture image between Jinggang Ancient Town and Changsha City.



182 Figure 3 Similarities and differences of water cultural images in Changsha and Jinggang ancient towns

183

184

184 **(1) Analysis of Specific Features**

185

185 **① The research areas all have obvious spatial development structures**

186

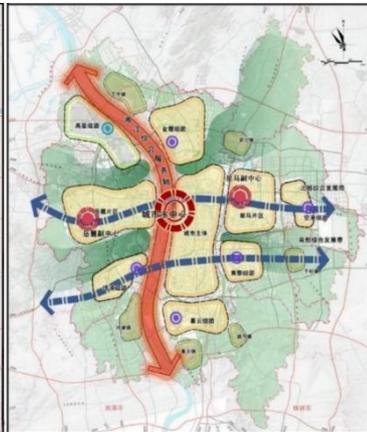
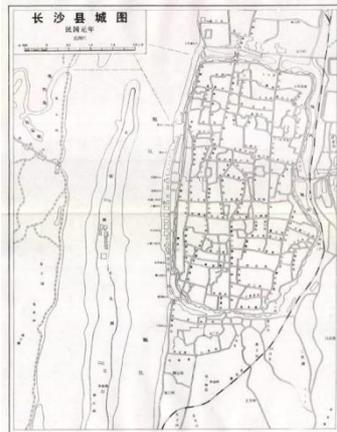
186 Ancient Changsha's external relations and economic development mainly depended on the
 187 shipping of the Xiangjiang River, so the spatial structure of Changsha City is closely related to the
 188 Xiangjiang River. In different development processes, the urban structure of Changsha underwent
 189 the unilateral development of relying on the Xiangjiang River in ancient times (Figure 4);

190

The change of "one subject and multiple groups" in the epoch ^[16]. Combining with the

191 development process of Changsha's urban structure, the Changsha City Master Plan (2003-2020)
192 revised in 2014 for Changsha's spatial structure plan is to expand the urban development space
193 along multiple growth axes and build a "one axis, two belts, multiple centers,"

194 The urban space structure of "one main, two groups and five groups" (Figure 6), this "one
195 axis" is the Xiangjiang River.



196
197
198
199

Figure 4 Changsha city map in 1912

Figure 5 Changsha city map in 1975

Figure 6 Spatial structure planning of Changsha city center

200 Note: Source of Figure 4 and Figure 5: <http://blog.sina.com.cn/kcj> Source of Figure 6: Urban master plan of
201 Changsha city (2003-2020) (Revised in 2014)

202

203 Due to the strategic location of Jinggang Ancient Town, the river not only has important
204 significance for the economic development of the ancient town, but also has a significant impact
205 on the architecture and spatial structure of the ancient town.

206 With the continuous development of water transport trade, people have built a number of
207 docks along the Lishui coast. There are still Temple Bay Quay, Yizheng Quay, Fanzi Quay, Chuhe
208 Quay, Luohe Quay, Caijia Quay, Tongren Quay, etc. Ancient Quay. Among them, "Seven Docks"
209 and the main street of the ancient town (Baoliang Street, Banbian Street, Jianjian Street, Baoan
210 Street, Shaoxian Road) plus the horizontal embankment, the south bank embankment, the
211 Xingnong embankment and the main alley, Tong Ren Lane, Pawnshop Lane, Justice Lane, etc.
212 constitute the spatial structure of the ancient town "Eight Streets, Four Lanes and Seven Quays"
213 [19].

214 **② Changsha is dominated by natural water landscapes, while Jinggang Ancient Town has**
215 **many human landscapes**

216 It can be seen from Table 1 that among the physical water cultural image of the study area,
217 the natural water landscapes in Changsha are mostly, including point landscapes such as Yanghu
218 Wetland Park and Orange Island, and line landscapes along the river scenery belt;

219 The ancient town of Jinggang is well-known for its water-rich buildings such as Linhe
220 Theatre and Ziyun Palace. This is mainly because Changsha City, as a national "two-type society"
221 comprehensive supporting reform experimental area, has been committed to the construction of
222 national ecological civilization cities in recent years, and has carried out measures such as sponge
223 city pilot construction and water ecological civilization construction; planning the construction of
224 Xiangjiang River and Liuyang River

225 Nine riverside scenery belts such as Jinjiang River and Jinjiang River have created island
226 island scenic spots and wetland parks such as the Orange Island Scenic Area and Yanghu Wetland
227 Park, and have built water-recreational leisure parks and water culture theme parks for citizens
228 such as West Lake Park and Parkland. The city image of "mountain, water, continent, and city" in
229 Changsha.

230 Jinggang Ancient Town, as a historical and cultural town prospered by water, has a long and
231 deep history of water culture, and its water transport and trade have flourished in history. The
232 people in the ancient town believed in "Water God"-General Yang Si and built the Ziyun Palace,
233 and built a riverside stage and other entertainment venues specifically for Ningxiang Wuxuzi boat
234 boss. At present, the ancient town of Jinggang also attaches great importance to the protection and
235 repair of historic buildings. It has better protection of buildings such as the Linhe opera platform
236 and the Ziyun Palace. Therefore, the humanistic water landscape of the ancient town is more
237 typical.

238 **③ There are many modern water and water conservancy facilities in Changsha, and the**
239 **traditional water and water treatment facilities in Jinggang Ancient Town are well**
240 **preserved.**

241 In the image of behavioral water culture, Changsha City is more about water-related facilities
242 and water treatment projects built by modern society, such as Changsha Port, Xiangjiang Bridge,
243 Xiangjiang Navigation and Power Junction, and the ancient town of Jinggang uses ancient
244 wharves and ancient embankments. (People in Hubei province and Hunan province built special
245 structures like dams around houses, fields, etc. in rivers and lakes lowlands.)^[20] Mainly used in
246 ancient water and water treatment facilities. With the development of the city, Changsha City
247 needs to build large facilities such as the Changsha Port and the Xiangjiang Bridge to meet its
248 economic development and transportation needs. Ancient water facilities have gradually
249 withdrawn from people's lives, which reflects the technological progress of people in controlling
250 and using water.

251 The ancient town of Jinggang reached prosperous water transportation in the late Qing
252 Dynasty. People built more than a dozen docks along the Lishui coast. Today the ancient town
253 retains Miaowan Wharf, Yizheng Wharf, Fanzi Wharf, Chuhe Wharf, Caihe Wharf, Caijia Wharf,
254 Tong

255 Seven ancient wharfs such as Ren Wharf; with the decline of water transportation, the
256 transfer function of the wharf gradually weakened, and now it has become a place for people to
257 wash clothes and the landscape of the ancient town.

258 The embankments of ancient towns were mostly built to prevent floods during the Qing
259 Dynasty. With the development of the ancient towns, the wider embankments such as the
260 horizontal embankment, the south bank embankment, and the Xingnong embankment also have
261 functions for pedestrians and vehicles.

262 Today, the ancient town's seven ancient wharfs, embankments such as the horizontal bank,
263 the south bank bank, and the Xingnong bank have become an important part of the ancient town's
264 "eight streets, four lanes, and seven docks" space structure.

265 **(2) Analysis of image characteristics**

266 **① The derived water culture in the study area is strong**

267 As can be seen from Table 1, well culture, embankment culture, and dock culture are the
268 image images of Changsha City and Jinggang Ancient Town under the water culture perspective.

269 Among them, well culture, embankment culture, and dock culture are all derivative cultures of
270 water culture. Since Changsha City was built on a low-lying river valley and plain, it has abundant
271 underground water with good water quality and high diving surface. The conditions for drilling
272 wells and drilling wells are good. Therefore, in ancient times, the ancestors of Changsha used
273 drinking water for wells^[21].

274 Changsha has a long history of drilling wells. From the ancient wells that have been
275 excavated and cleaned up, it has been from the Warring States Period, the Western Han Dynasty to
276 the Wei and Jin, Tang and Song, Yuan, Ming, and Qing dynasties. Huaijing has a history of more
277 than 2000 years. Due to the unique geographical location of Jinggang Ancient Town, due to the
278 threat of flooding and prolonged flooding, people have built wharves for the development of water
279 transport and built embankments to resist flooding. The ancient town's ideas and thoughts on water
280 use and water management have gradually formed the unique characteristics of the ancient town.
281 Regional culture-dock culture, embankment culture. In particular, the quay of the ancient town can
282 be said to be the symbol of the ancient town. The blocks and market towns of the ancient town
283 have been developed due to the prosperity of the quay and water transportation. Therefore, the
284 dock culture can represent the town's sense of identity and identity with the town.

285 ② **The urban spirit of Changsha and the "water god" faith in the ancient town of Jinggang**

286 Water, good for everything without dispute, in the process of dealing with water, Changsha
287 people living on the banks of the Xiang River were deeply affected by water, forming a spirit of
288 dedication to the city. "Dare to be the first, save the world" is a high concentration of the spirit of
289 the city of Changsha. During the Anti-Japanese period, the people of Changsha came to meet the
290 Japanese invaders and dedicate themselves to defending their homeland. At the time of the flood,
291 the people of Changsha dared to leave their lives and die Flood front. The ancient town of
292 Jinggang was prospered by the water and was affected by the water. People have infinite awe of
293 the water. Therefore, the people in the ancient town formed a "water worship" psychology. They
294 worshiped General Yang Si as a "water god" and built sacrifice temples. Every June 6th, the Ziyun
295 Palace Temple Fair and other large-scale sacrifice activities have been formed since ancient times.
296 The "Water God" faith has become a concentrated expression of the cultural heritage of the ancient
297 town of Jinggang.

298 **2.4 Study on the path of water culture image building in the study area**

299 By comparing the water culture images of Changsha and Jinggang Ancient Towns and
300 analyzing their image characteristics, we can see that the water culture images of the two places
301 are similar and different. The similarity is mainly that both places have obvious spatial
302 development structures and derived water cultures, and the differences are reflected in the water
303 landscape, water treatment engineering facilities, water beliefs, and water spirit of the two places.
304 Based on the similarities and differences between the water culture images of Changsha and
305 Jinggang Ancient Town, this study proposes the following path suggestions for the formation of
306 water culture images in the two places (Figure 7).

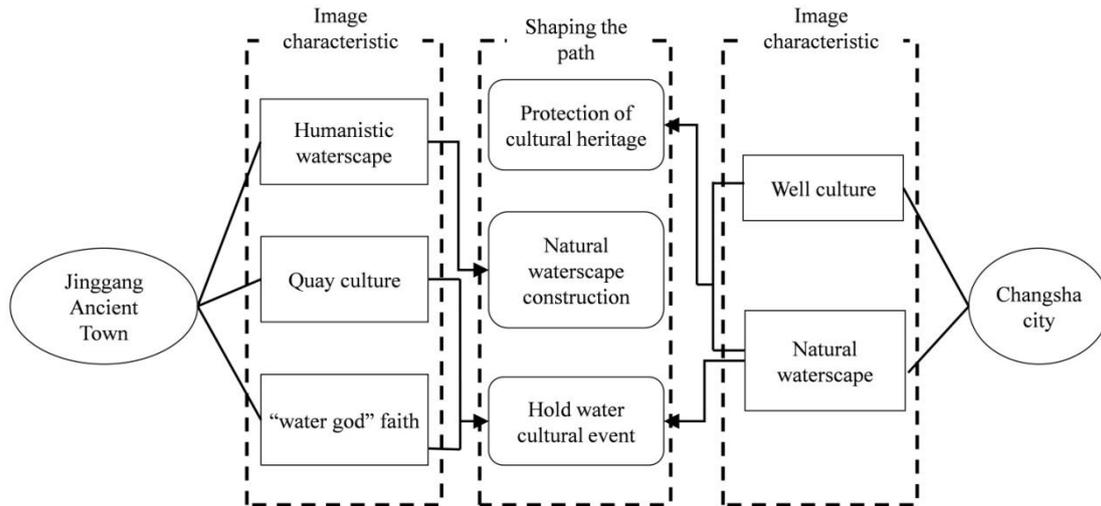


Figure 7 Image Shaping Path of Changsha City and Jinggang Ancient Town

307

308

309

310 **(1) Pay attention to the protection of water cultural heritage and inherit water culture**

311 According to the previous article, in Changsha, many natural water landscapes, such as the
 312 scenery belt along the river, the island scenic area and the ecological leisure park, are relatively
 313 insignificant in comparison with the human water landscape. And Changsha has a long well
 314 culture, which is not only a major feature of Changsha, a historical and cultural city, and an
 315 important water cultural resource, but also a witness to the changes in Changsha's urban area.
 316 From the Han Dynasty to the Qing Dynasty, Changsha's urban area changed frequently. Gujing
 317 laid down a basic framework for Changsha's urban area. It can be said that where Gujing is, the
 318 urban area of Changsha is basically delimited there. However, due to the demolition of old cities
 319 and the construction of new ones, the pollution of well water, the development of tap water, and
 320 the destruction of the Wenxi fire ^[21], the ancient wells in Changsha gradually disappeared in front
 321 of people. At the end of the last century and the beginning of the century, there were still more
 322 than 500 wells cleaned up and excavated in Changsha. To date, there are only more than ten wells
 323 still in use in Changsha. Landfill. Regarding the protection of ancient wells, Changsha City has
 324 now effectively implemented ancient wells such as Baishajing, Panhoujie Ancient Wells, Shuifeng
 325 Well, Yingshanxiang Ancient Wells, and Jingjing through the construction of parks, pavilions, and
 326 renovation and decoration of ancient wells. protection of. In order to continue the development of
 327 well culture and shape the landscape of historical ancient wells, Changsha City should pay
 328 attention to the significance of ancient wells. According to the actual situation of ancient wells,
 329 comprehensively construct parks and pavilions, and further control pollution of well water and
 330 promulgate laws and regulations on the protection of cultural relics. Measures will be taken to
 331 protect the ancient wells and retain the historical witness of the development of Changsha.

332 **(2) Create a water landscape in combination with the natural environment**

333 The ancient town of Jinggang has built a lot of docks due to the prosperity of water
 334 transportation and commerce. In addition, people believe in the "water god" and built the Ziyun
 335 Palace to worship and worship. Therefore, the ancient town of Jinggang takes the human
 336 landscape such as Yangsi Temple and the ancient dock as the Lord. Although the ancient town is
 337 located in the delta area where the Lishui meets the Xiangjiang River, surrounded by water bodies
 338 such as Laoshui, Xiangjiang River, and Tuantou Lake, it presents the most natural forms of rivers

339 and lakes, and does not form a representative water landscape. The image of the water landscape is
340 not obvious.

341 Compared with the ancient town of Jinggang, Changsha City has made full use of its river
342 bank and wetland, lake and other resources to create a series of natural water landscapes.
343 Therefore, Jinggang Ancient Town can learn from the experience of Changsha City, take the
344 natural water system as the lead, and use the existing water resources such as rivers and lakes to
345 create a natural water landscape. For example, you can plant flowers and plants on the banks of
346 the Huangshui River and the inner bank of the Jiahe River for greening, create a sightseeing trail
347 near the water, provide a hydrophilic place for people, and combine the historical and cultural
348 features of the ancient town with the beautiful natural environment.

349 **(3) Organizing water cultural activities to enrich the water cultural atmosphere**

350 By analyzing the water cultural figurative and imagery images of Changsha and Jinggang
351 Ancient Town, it can be seen that Changsha City is dominated by static natural landscape display,
352 Jinggang Ancient Town is dominated by human water cultural landscape and traditional sacrifices,
353 and people are very involved in water culture less. Therefore, Changsha City and Jinggang
354 Ancient Town can organize related water cultural activities according to their own characteristics,
355 enrich the water cultural atmosphere, and enhance people's hydrophilicity and participation. For
356 example, Changsha City can launch cruise ships to browse the Xiang River and Liuyang River
357 coastal landscape services, allowing people to experience and appreciate the "water" image of
358 "mountain, water, continent, and city" in Changsha; and to hold some large dragon boat
359 competitions, both Inheriting traditional customs can deepen the historical and cultural
360 connotation of its water cultural image. According to its own conditions, Jinggang Ancient Town
361 can, in addition to holding traditional folk activities such as the June 6 Ziyun Palace Temple Fair,
362 also repair the ancient quay, carry out activities such as boarding a canopy boat and fishing, and
363 display the static culture of the ancient town. The combination of dynamic entertainment and
364 leisure allows tourists to enjoy and relax physically and mentally while visiting and savoring the
365 cultural history and landscape of the ancient town.

366 **Conclusions**

367 This study mainly extracted the water culture images of Changsha and Jinggang ancient
368 towns from three aspects of physical water culture, behavioral water culture and spiritual water
369 culture, and compared and analyzed them. Finally, based on this, Changsha and Jinggang The
370 ancient town's image of water culture puts forward appropriate suggestions and countermeasures.

371 By analyzing the water cultural concrete image and image of Changsha City and Jinggang
372 Ancient Town, we can see that the water cultural concrete image characteristics of the two places
373 are: (1) the study area has a clear spatial development structure; the current urban spatial structure
374 of Changsha City is " One axis, two belts, multiple centers, one host and two groups of five ",
375 Jinggang Ancient Town is " eight streets, four lanes and seven quays ". (2) Natural water
376 landscapes such as the scenic belts along the Yangtze River in Changsha, Chau Island Scenic Area,
377 and ecological leisure parks. Jinggang Ancient Town is dominated by humanities such as temples
378 and ancient opera platforms. And other large-scale ports and water conservancy facilities, while
379 the traditional water and water treatment facilities such as the ancient quay and ancient dike in
380 Jinggang Ancient Town are well preserved; among them, there are seven quay which are Miaowan
381 Quay, Caijia Quay, Chuhe Quay, Tongren Quay, and Luohe Quay, Yizheng Quay, Fanzi Quay, etc.

382 The image characteristics of the water culture image of the two places have the following two

383 points: (1) The study area has a long and deep derived water culture; the formation of well culture
384 in Changsha is mainly related to the terrain and groundwater conditions, and the dock culture and
385 embankment in the ancient town of Jinggang

386 Nuo culture was formed due to the development of water transport in the ancient town and
387 the control of floods. (2) The spiritual water culture in the study area is mainly reflected in the
388 urban spirit of Changsha City, “Dare to Be the First, Save the World” and the “Water God” belief
389 and sacrifice activities in Jinggang Ancient Town. Judging from the characteristics of the water
390 culture image of Changsha City and Jinggang Ancient Town, the water culture image of the two
391 places is quite different: the water culture image of Changsha City is greatly affected by the
392 development and construction of modern cities, and the water culture image of Jinggang Ancient
393 Town is mainly from the ancient town. The "Water God" belief, dock culture and other elements
394 are reflected. Combining the characteristics of the water culture image of Changsha City and the
395 ancient town of Jinggang with their differences, they can learn from each other's outstanding
396 features and provide ideas for shaping each other's water culture image. For example, there are
397 few traditional water cultural elements in Changsha, and the protection of water cultural heritage
398 should be emphasized. The natural water cultural elements of Jinggang Ancient Town are not
399 prominent, and the natural water environment should be appropriately used to create a water
400 landscape. The interaction between water culture and people in the two places If it is not strong,
401 you can take measures to improve water cultural facilities and increase water cultural activities in
402 combination with your own conditions.

403 The connotation of water culture is general and extensive, and it can be divided into multiple
404 categories according to different classification standards. This study only studies the image
405 building of water culture in Changsha City and Jinggang Ancient Town from physical water
406 culture, behavioral water culture and spiritual water culture. There are some shortcomings. In
407 further research, the water culture can be more comprehensively classified according to the actual
408 conditions of Changsha City and the ancient town of Jinggang, and the water culture image of the
409 two places can be studied in depth to provide more inspiration and reference for the image
410 building of the two places.

411

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414

415 **Authors' contributions**

416 LY and YYD conceived and designed the research. XFP performed the research and analyzed the
417 data and material. XYC, XFP and CF wrote the manuscript. ZLW, XHH, ZYL was mainly
418 responsible for fieldwork. LY and CF helped perform the analysis and edit the manuscript. All
419 authors read and approved the final manuscript.

420

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427

428 **Availability of data and materials**

429 All data generated during this study are either included in this published article or available from
430 the corresponding author upon reasonable request

431

432 **Declarations**

433

434 **Ethics approval and consent to participate**

435 Not applicable.

436

437 **Consent for publication**

438 Written informed consent for publication was obtained from all participants.

439

440 **Competing interests**

441 The authors declare that they have no competing interests.

442

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452 **References:**

453 [1] MAO Chunmei, CHEN yi-ci, SUN zongfeng, et. Connotation of water culture in new period and
454 relationship between water culture and water conservancy culture[J]. Journal of Economics of
455 Water Resources,2011,29(4):63-65.

456 [2] MENG Yaming, YU Kaining. A general research on the connotation, research method and
457 meaning of water culture[J]. Journal of Jiangnan University (Humanities & Social Sciences),
458 2008,7(4):63-66.

459 [3] Kevin lynch. urban image[M]. Beijing: Huaxia Press,2001:38.

460 [4] WEN Jian-gang. Art design of the image and the environmental of small town [M]. Nanjing:
461 Southeast University Press,2001.

462 [5] LIU song. Molding of the city image[D]. Beijing: Capital University of Economics and
463 Business,2003.

464 [6] QI gaoxiang. Research on ancient village image design—Take Niangziguan Ancient Village in
465 Shanxi Province as an example[D]. Suzhou: Suzhou University of Science and Technology,2014.

466 [7] Vitruvii. The books on architecture [M]. Beijing: China Architecture & Building Press,1996.

467 [8] CHEN zhi. The necessity of improving the urban beauty of Nanjing[J]. Eastern
468 Miscellany,1928,25(13).6-12.

- 469 [9] WANG Ying. Research on the application of tea culture in urban image building and soft power
470 enhancement [J]. Tea in Fujian,2017,39(10):351-352.
- 471 [10] HOU Yanyan, ZhANG Xinyue. Heilongjiang folk culture and border city image design [J] .Art
472 Science and Technology,2017,30(1):48.
- 473 [11] WAN Yuanyuan.The Food Culture and City Image Building of Chongqing——Based on the
474 Perspective of Bayu Culture [J]. Journal of Chongqing University of Science and Technology:
475 Social Science Edition,2016(6):91-93.
- 476 [12] Duan xujing. Chinese Primitive Villages Visual Image Development Research [D]. Tianjin:
477 Tianjin University of Technology,2015.
- 478 [13] Zhang Jinghe, Ling Shanjing, Lu Lin. Design for Tourist Image of Ancient Village Settlement of
479 the Village Hongcun [J]. Geography and Territorial Research, 2001,17(3):82-87.
- 480 [14] WANG Ning. Design and Promotion of the Visual Image of Ancient Villages——A Case Study of
481 Xidi Village, Anhui [J]. Arts Research,2016(4):4-6.
- 482 [15] Changsha local records network. location [EB/OL]. <http://szb.changsha.gov.cn>,2016-07-27.
- 483 [16] JIANG qi. Study on the Relationship between the Formation of Spatial Pattern and the Change of
484 Water System in Changsha[C] 60 years of planning: achievements and challenges-Proceedings of
485 the 2016 China Urban Planning Annual Conference (07 Urban Ecological Planning). Beijing:
486 China Architecture & Building Press,2016.552-564.
- 487 [17] LUO wei. A study on historic Jinggang town of Wangcheng county in Hunan[D]. Wuhan: Wuhan
488 University of Technology.2008.
- 489 [18] ZUO qiting. Discussion on key problems in water cultural research[J]. China Water
490 Resources,2014(9):56-59.
- 491 [19] LUO wei. Ancient town located on the junction of hsiang river and Wei river in Hunan province:
492 Jinggang ancien [J]. Huazhong Architecture, 2009,27(1):178-186.
- 493 [20] GUO Xin. Current situation and development strategy of tourism exploration in Jing Gang ancient
494 town[J]. Territory & Natural Resources Study, 2011(5):77-79.
- 495 [21] Changsha culture and history net. Life and soul of Water-City
496 [EB/OL].<http://www.changsha0731.cn>,2009-08-20.

Figures

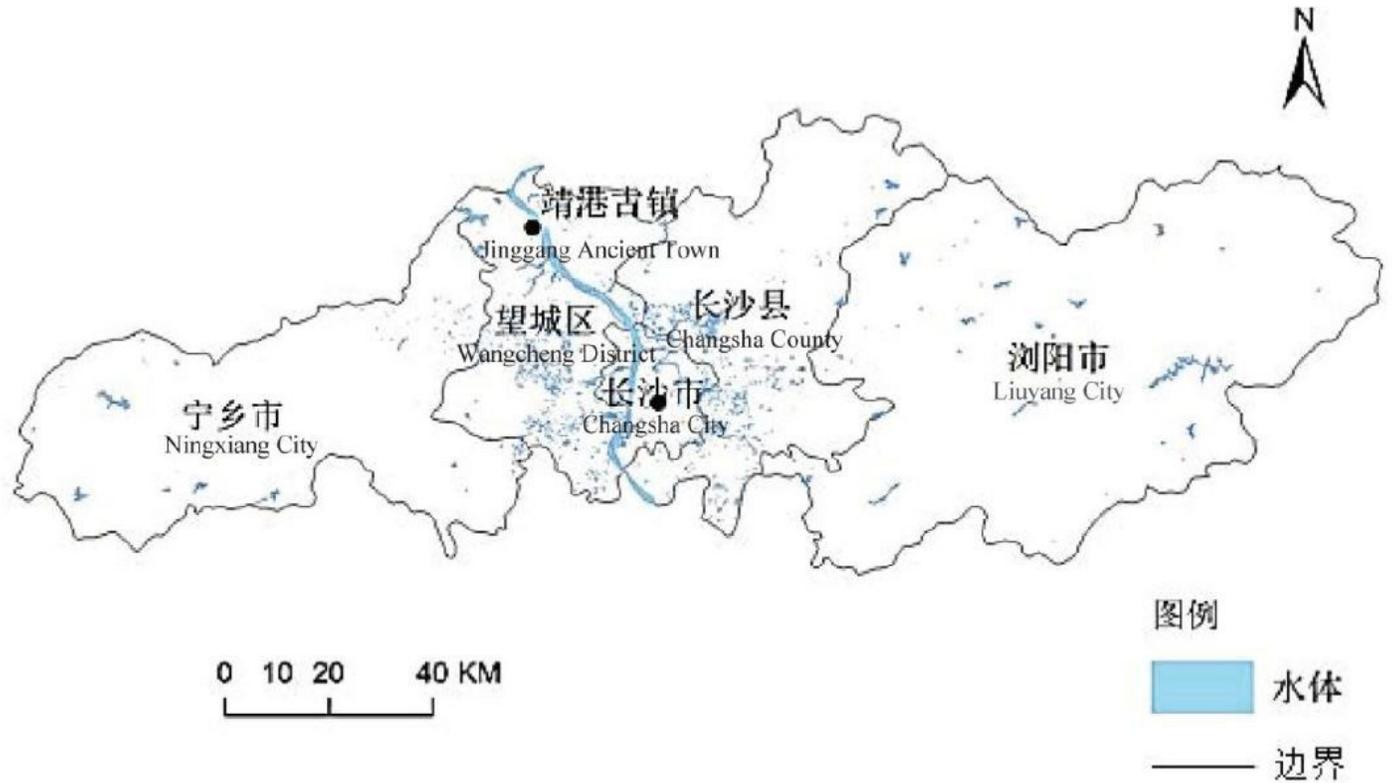


Figure 1

Location of Jinggang ancient town in Changsha city. Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.

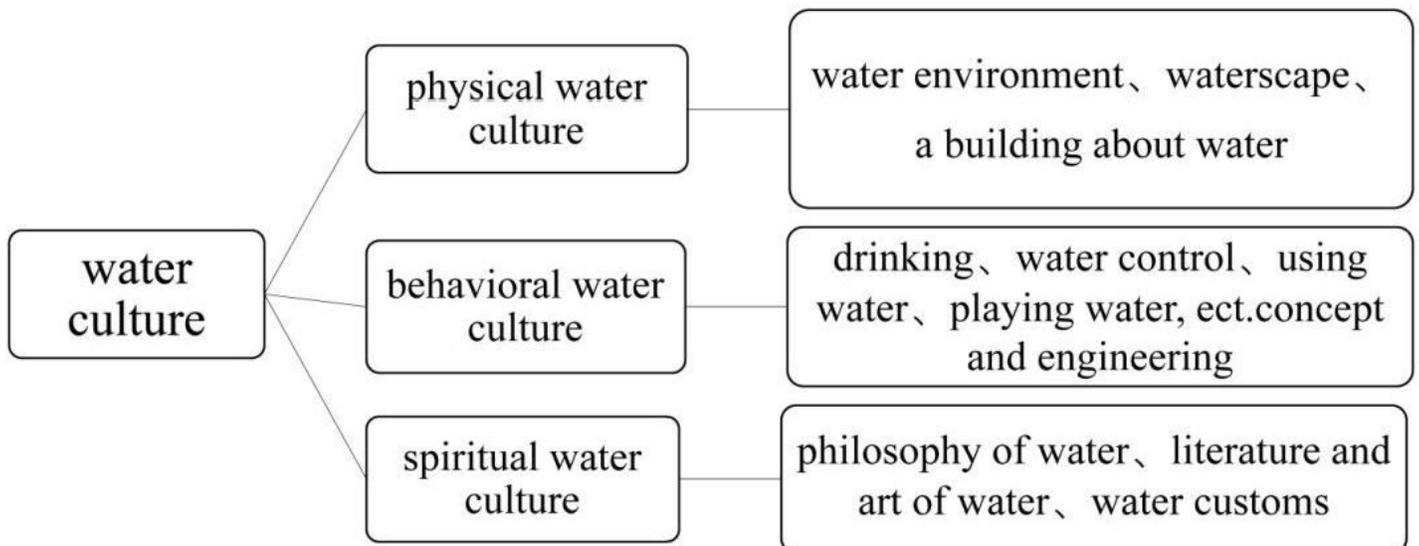


Figure 2

Classification of water culture

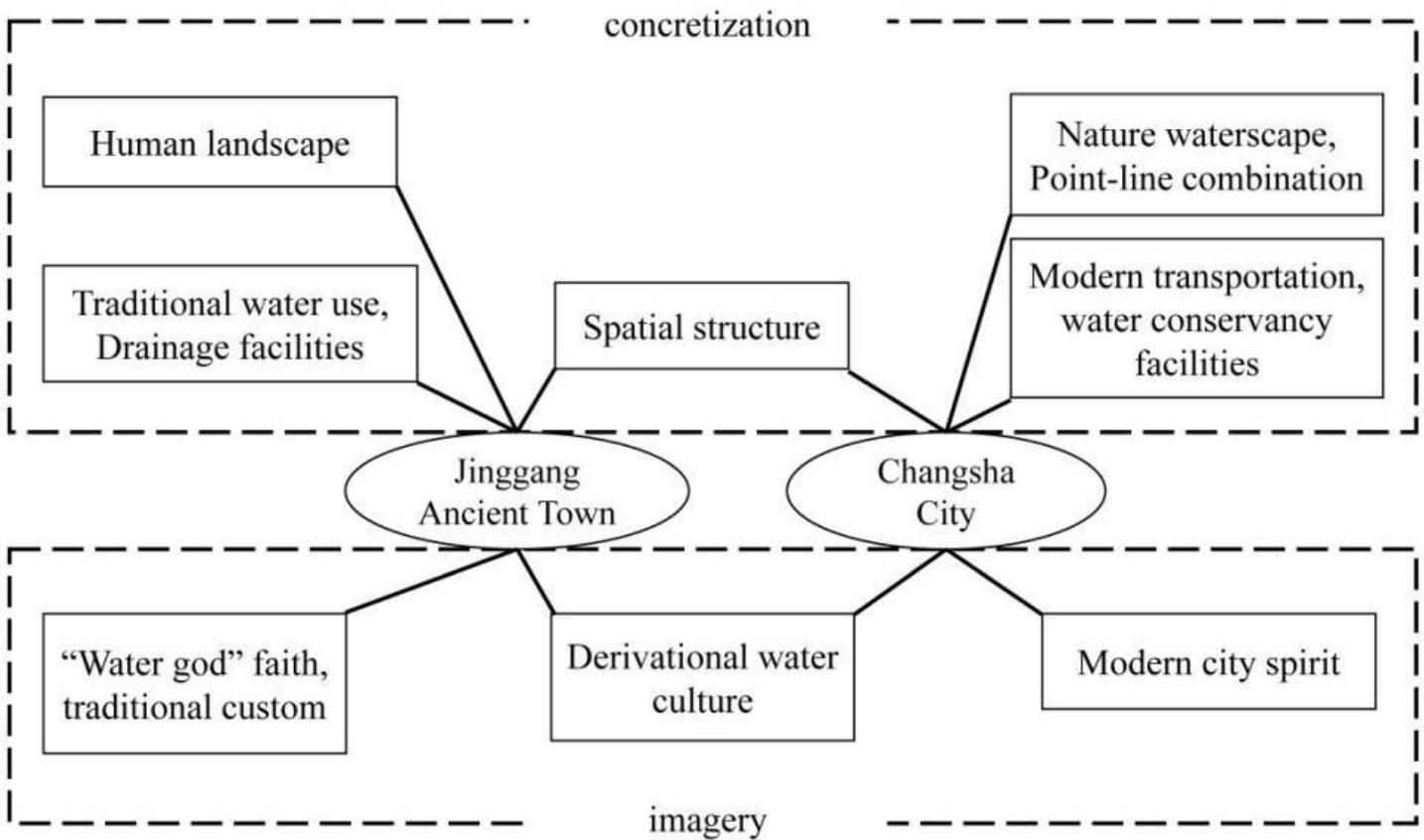


Figure 3

Similarities and differences of water cultural images in Changsha and Jinggang ancient towns

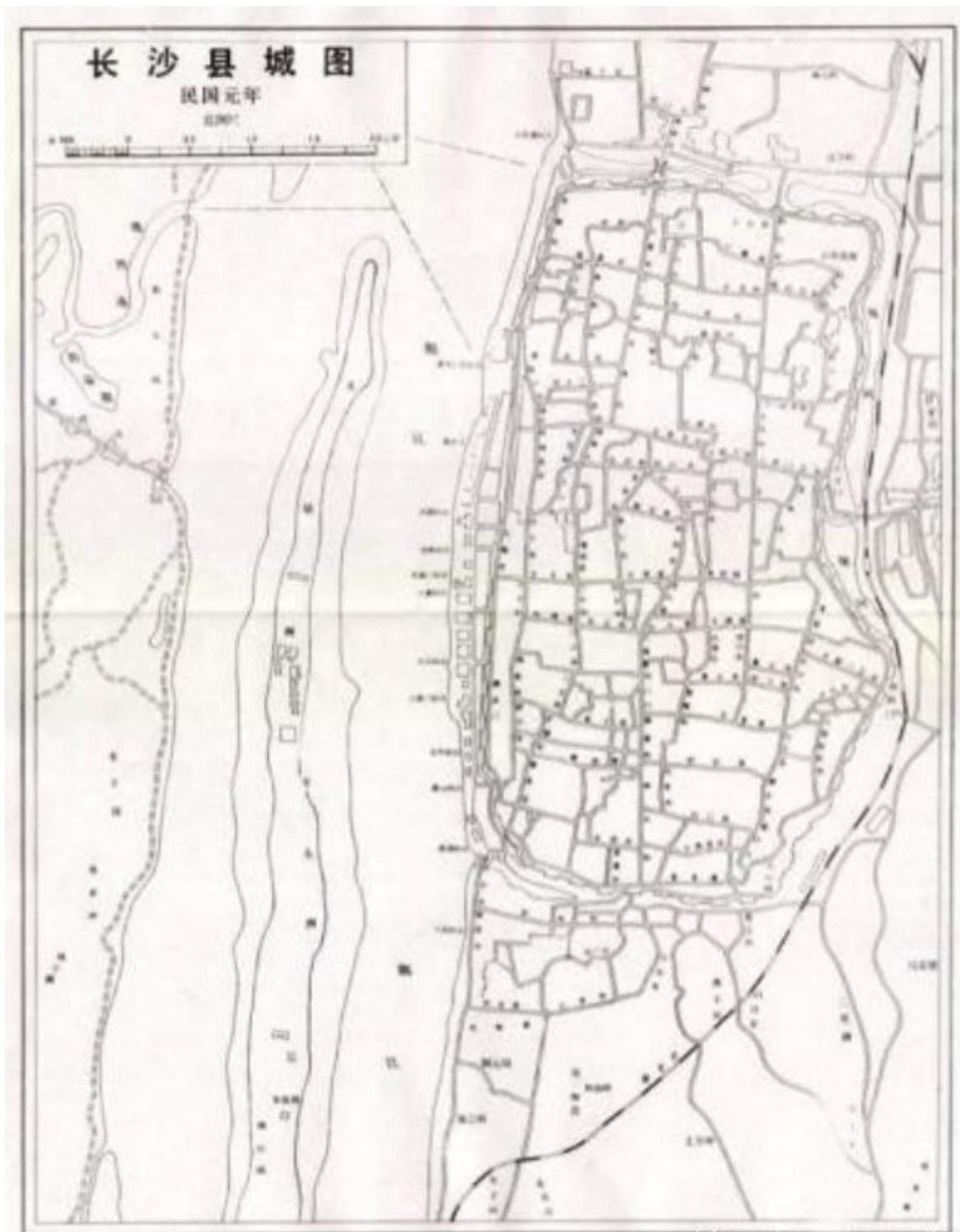


Figure 4

Changsha city map in 1912. Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.

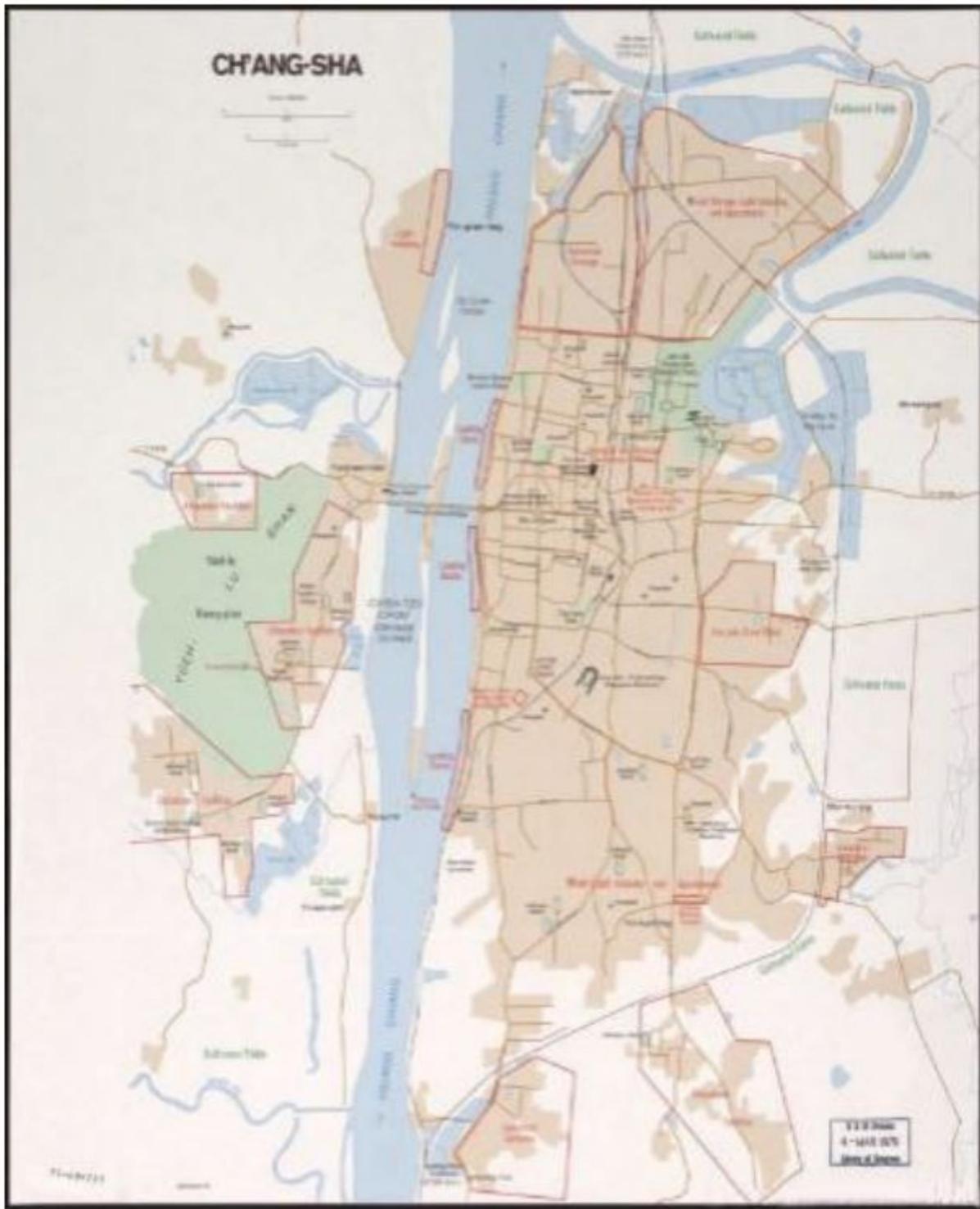


Figure 5

Changsha city map in 1975. Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.

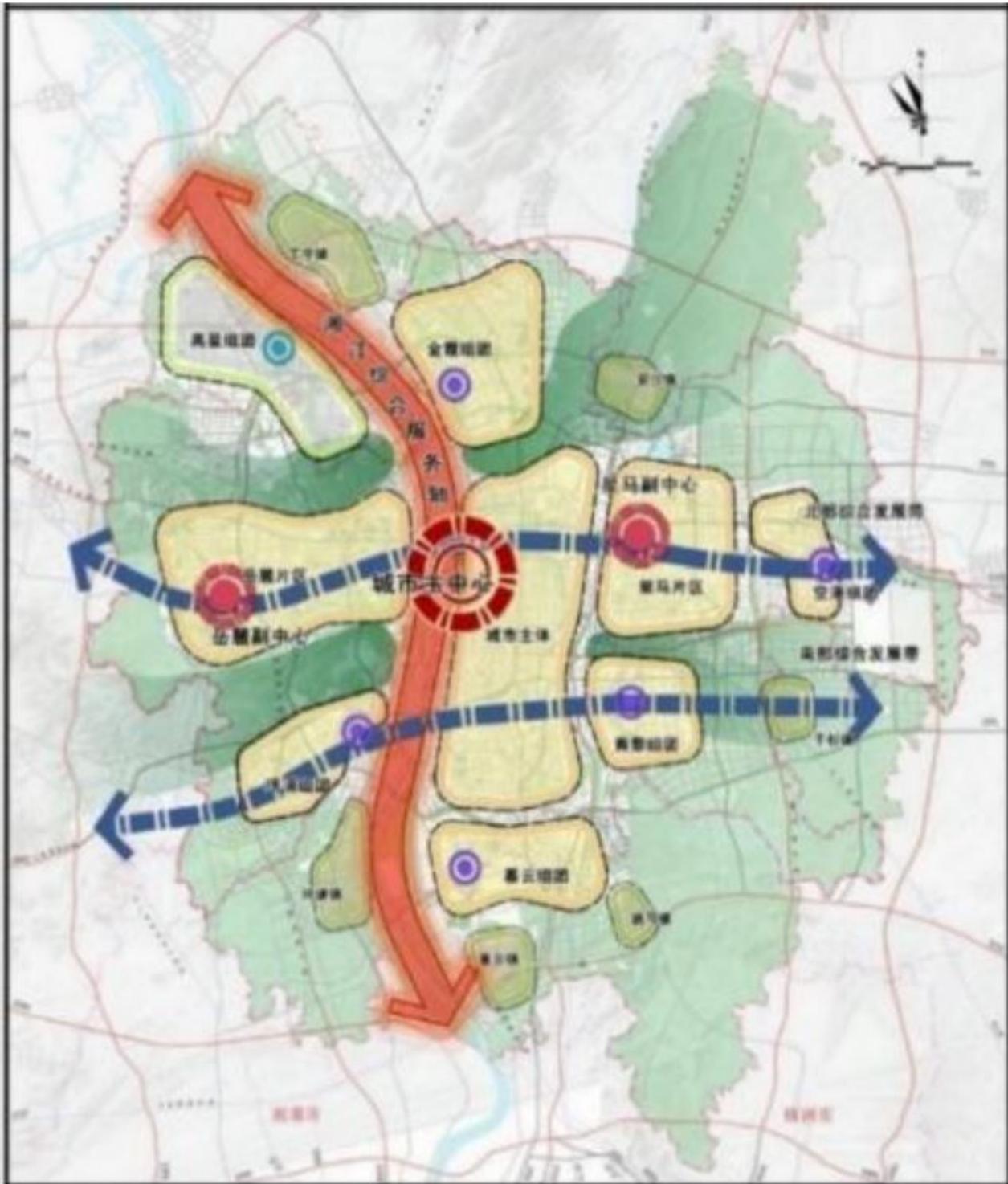


Figure 6

Spatial structure planning of Changsha city center. Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.

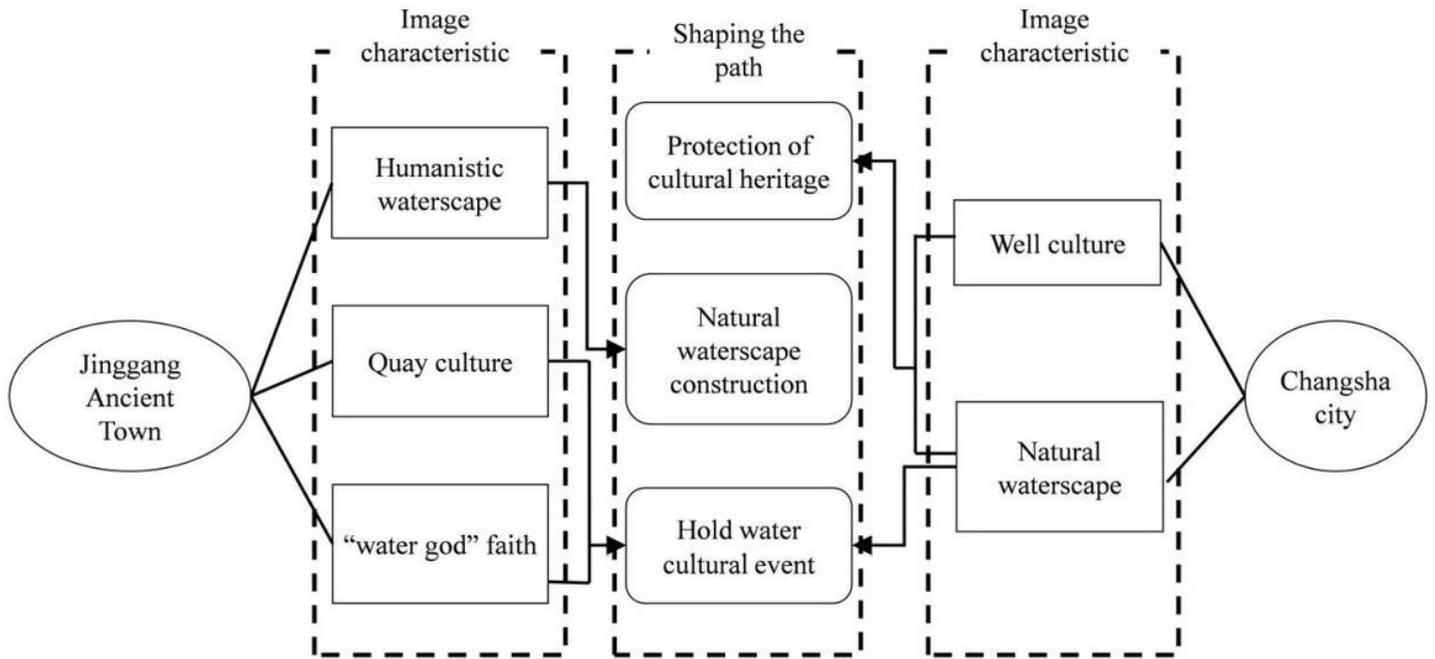


Figure 7

Image Shaping Path of Changsha City and Jinggang Ancient Town