

Inheritance and Protection of the Water-Faring Community (Dan Jia) Boathouse Structure in the Guangdong-Hong Kong-Macao Greater Bay Area

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ABSTRACT

Most of the past urban and rural planning or urban renewal design focused on land planning, or land communities involving waterfront space. However, in reality, there are water-faring communities (The Dan Jia Settlements) dating back to 7,000 years ago, most of which still lived away from the sea, or still take the houseboat as their home, with a few generations of the old living in the cabin; or they rely on the river bank embankment, planting wooden stakes to build up the trusses, placing bamboo rice as the top wall, laying wooden boards as ground mats, and covering the waters of the “(Vernacular) Pillar-Supported Dwelling” (Stilt Style Architecture) as a land-based residence for water work. This article focuses on the architectural form of the water-faring communities (The Dan Jia Settlements), and puts forward some current heritage protection measures and suggestions.

Keywords: Water-Faring Community (Dan Jia), Boathouse Structure, inheritance and protection, Guangdong-Hong Kong-Macao Greater Bay Area

I. INTRODUCTION

In Guangdong, the water dwellers and mobile fishermen who were distributed in the various branches of the lower reaches of the Pearl River were called the Water-Faring Community (Dan Jia, Chinese name translated into “疍家”) and the Dan people (most of the data in the last century are also written as “Dan people”), and their origins can be traced back to 7000 years ago which is called Hemudu time. They are mainly engaged in fisheries and water transportation in coastal harbors. They have been living in floating houses for many generations. They have been fighting the wind and waves for many years. Therefore, some scholars believe that the Dan people are descendants of the ancient Yue people, calling them “the greatest navigators in ancient China.”

Most of the Water-Faring Community (Dan Jia) still live a life close to the sea, or they still use the houseboat as their home, and the old and minority generations live in the cabins; or rely on the banks of rivers and seas, planted with wooden piles, and placed bamboo as the top wall, wooden planks are used as floor mats, and a “hanging-foot building” (dry-type building) facing the water is built as a land residence, which is convenient for water work.

However, through the prosperity and development of cities in Guangdong, the introduction of the

Guangdong-Hong Kong-Macao Greater Bay Area plan, and the rapid development of urban and rural planning. Today, there are fewer and fewer Water-Faring Community (Dan Jia) members who are totally home to ships, or forced to move ashore under the urban development plan, or relatively backward economic reasons are not enough to support the overall life, thus abandoning the original “site”. The overall significance of urban planning is mainly for land communities, and this unique group of water communities, discrimination in the old days, “foot-washing ashore” in the new era, or the preservation of intangible cultural heritage, or the threat of disappearance due to family relocation settlement has become a factor affecting the inheritance of the Water-Faring Community (Dan Jia) culture. From the perspective of urban heritage, the family is one of them. Gradually, the unique building posture, history, culture, and lifestyle of the Water-Faring Community (Dan Jia) have gradually drifted away.

At the same time, through the author's visit and investigation, the author found that despite the densely populated river network in the Guangdong-Hong Kong-Macao Greater Bay Area and the sparsely settlements of the Water-Faring Community (Dan Jia), but the cities have different management systems and cultural emphasis on the Water-Faring Community (Dan Jia), which is now facing the problem of future urban planning and development.

As an ancient business card and an ancient ethnic group in the Guangdong-Hong Kong-Macao Greater Bay Area, how to take into account both land communities and water communities in future urban planning, balance the relationship between them, and how to make this urban heritage taking the road that can protect its cultural value and reflect the regional characteristics in future urban planning is a matter of great concern to local governments, planners, and cultural scholars, and all walks of life.

II. HISTORICAL RECORDS OF THE WATER-FARING COMMUNITY (DAN JIA)

In Cantonese area (Guangzhou, Foshan, Zhaoqing, Jiangmen, Zhongshan, Zhuhai, Dongguan, Maoming, Yangjiang, Yunfu, Shaoguan, Qingyuan, and some counties in Huizhou and Shenzhen), according to the available information, it is not entirely composed of native Guangzhou people, but is composed of Nanyue people and Dan people. After the immigrants and integration of the southward migration in the later period, now have the Cantonese people today. In the old days, the Water-Faring Community (Dan Jia) did not have the recognition of land residents, and the government did not register them as floating fishermen. They were not allowed to go ashore or buried on land after death. Most Dan people can only be buried on a shoal by the water's shore after death. But when the storm comes, after the rainstorm, the corpse will be revealed, and it will become the food snatched by beasts and vultures, which is horrible. Therefore, the old salt water song “sha tian dan jia shui liu chai, chi jiao wu zhun xing shang jie, ku shui xian chao fu lan ting, mang mang da hai zang shi hai” This is a true portrayal of the hard life of the people at that time.

There are not many historical materials about the Water-Faring Community (Dan Jia), but they are scattered. It can be traced back to Qin Shihuang's “Shiji · Shihuangbenji” as early as 33 years. According to historical records that can only be consulted, most of them describe the appearance of the Water-Faring Community (Dan Jia) in the South Vietnamese era, the way they lived and farmed, and the housewife and flower boat style who engaged in the “boat prostitutes” industry on both sides of the Pearl River in Guangzhou during the Qing Dynasty. In addition, there is a record of taxation of the people in “Xiangshan County Records” edited by the famous Guangzhou scholar Chen li during the Tongzhi period of the Qing Dynasty.

By the end of the Qing Dynasty, Guangzhou was a trading port for foreign trade, and more and more foreigners also lived in Guangzhou. In their observations and records, there were also some fragmented statements against their family members. For example, the famous French painter Auguste Borget arrived in Guangzhou at the beginning of the

19th century. He was surprised by the various boats in Guangzhou, which are large and small, and very curious about Water-Faring Community (Dan Jia). He once described such a floating home: “the front deck is covered with clean cushions for passengers, and the Water-Faring Community (Dan Jia) is squeezed into the rear cabin to allow space for passengers in the front cabin.” The British missionary George Smith also described the modest concession of the water people as “making way to each ship” is the life philosophy of the water community.

III. TYPES OF SHIPBUILDING

There are not many types of buildings in the Water-Faring Community (Dan Jia), mainly in the following three types:

A. Water-Faring Community (Dan Jia) Maoliao

Water-Faring Community (Dan Jia) Maoliao (as is shown in “Fig. 1”) originated from the Qing Dynasty, because in the old days the Water-Faring Community (Dan Jia) suffered discrimination and was not allowed to go ashore. However, in the middle of the Qing Dynasty, the problems of smuggling along the coast of Guangdong and the harassment of foreigners were very serious. As one of the measures of sea embargo, the Qing government issued The “Allow Guangdong Water-Faring Community (Dan Jia) order grants “Dan people” ashore to settle and cultivate. The Water-Faring Community (Dan Jia) began to build “hanging feet thatched grasses” along the beach, reclamation and farming, and lived more than half of fishing and farming (as is shown in “Fig. 2”).



Fig. 1. Maoliao in Dongchong Farming, Fishing and Hunting Exhibition Hall, Dongchong Water Village, Nansha District, Guangzhou.

^a Photographed by the author



Fig. 2. Maoliao in Dongchong Farming, Fishing and Hunting Exhibition Hall, Dongchong Water Village, Nansha District, Guangzhou.

^a. Photographed by the author

In the water villages of the modern Water-Faring Community (Dan Jia) or the coasts of the inland rivers, the old Water-Faring Community (Dan Jia)'s Maoliao that has remained in the old days has gradually reduced. Most of the existing ones have been rebuilt for some local special sightseeing tours in the past few years. Some of them are in the exhibition halls or museums of water village culture and Water-Faring Community (Dan Jia) culture, such as the Dongchong Farming, Fishing and Hunting Exhibition Hall in Dongchong Water Township, Nansha District, Guangzhou, and the Binjiang Water Resident Folk Museum in Haizhu District. According to the author's field visits, it can be seen that the overall appearance of Maoliao is like a "boat house" half fixed on the river bank. Its exterior is made of bark and bamboo. The bark has the functions of protecting against cold, heatstroke, and preventing pests and diseases. It absorbs some toxic substances in the environment, and the bamboo has good toughness and strong plasticity in construction. It is widely planted in Lingnan and it is very convenient for the Water-Faring Community (Dan Jia) to obtain local materials. The top of Maoliao is decorated with tree bark, and the main body is supported by bamboo. It is not only durable, pollution-free, ecological and environmentally friendly, but also has a certain value of traditional water town architecture (as is shown in "Fig. 3").



Fig. 3. Maoliao and Water-Faring Community (Dan Jia) boat of Binjiang Water Resident Folk Museum in Haizhu District, Guangzhou.

^a. Photographed by the author



Fig. 4. Existing Maoliao in Dawen Village, Dongchong Water Town, Nansha District, Guangzhou City.

^a. Photographed by https://dp.pconline.com.cn/dphoto/list_3314943.html
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However, the construction location of Water-Faring Community (Dan Jia)'s Maoliao is not exactly the same, and the Water-Faring Community (Dan Jia) will build it according to their own living needs. For example, Water-Faring Community (Dan Jia)'s Maoliao is located on the side of the field(as is shown in "Fig. 4"), which is used to store and place farming tools. For anti-theft considerations, live in a cottage that stores farming tools. However, if thatch is built by the water, most of it is reinforced with bamboo with a high tenacity that is inserted straight into the river mud or reinforced with water, and then wooden boards and columns are used as the bottom and skeleton of thatch. It is basically used for the residents' living purpose. The materials are very convenient, the construction time is very short, and the cost is low.

In the past, the Water-Faring Community (Dan Jia)'s life was floating on the water, and there was no fixed home on the shore. So they had to ask for a little space on the edge of the river's riverbank to build a dwelling thatched cottage, and it was also convenient for the Water-Faring Community (Dan Jia) to care the only ship. But now, the living environment of the Water-Faring Community (Dan Jia) has changed. The traditional Water-Faring Community (Dan Jia) Maoliao is not exactly the same living space as the old days, but has gradually evolved into a storage room for agricultural tools during farming.

B. Water-Faring Community (Dan Jia) Shack House

The shacks originated from the 18th century to the 19th century and originated from the local Water-Faring Community (Dan Jia) fishermen. Because the size of the fishing boat is limited, one boat house is a family. There is not much living space available, and the Water-Faring Community (Dan Jia) is not used to living ashore. On the seabed on the shore, the Water-Faring Community (Dan Jia) also set up shacks, which are different from the scattered Maoliao. The shacks are mainly distributed on the beach. Wood and sunflower leaves are the main construction materials. The shack is

fixed above the water, and larger fishing boats can be parked next to the shack.

Traditional shacks are also designed in accordance with the concept of fishing boats. The “shack head” is the place where fishermen live and sleep, and the “shack tail” is where the family members put the seafood there after they return from the sea to use for salted fish and kelp. , Making shrimp paste, etc.

The interior structure of the shack is generally a hall and a room. A slightly larger area will also be provided with two symmetrical sheds, with no closed open partitions on the top. As far as the shed is concerned, the large one is called a “house” and the small space is called a “room”. The small compartment in the house is also called a “bride room” and is usually inhabited by married family members. The door of the room is separated by a cloth curtain. The hand-embroidered colored satin door head is hung above the cloth curtain. It is embroidery embroidered by a woman of her own family when preparing for marriage. Gorgeous flower buds connected to the branches and vines symbolize the opening of branches and leaves, and many blessings.



Fig. 5. Shacks connected with households in Da ao Fishing Village, Islands District, Hong Kong SAR.

^a Photographed by the author

The shacks are connected to each other, and some passages will directly pass through the living room or kitchen of the neighbor, further creating a closer relationship with the neighbors (as is shown in “Fig. 5”).

The wood used as the stilt pillar foundation needs to be carefully selected and can withstand long-term water erosion. The feet are mainly made of croissant wood, beef tendon wood, yellow cow-wood, and stone sandwich wood, etc. Later, some of the Water-Faring Community (Dan Jia)’s shacks pillar foundations also began to use stone material, and the simple living space is made of bamboo and wood is placed on the flat frame. Later, the area was further expanded, and in some places, there was a half-level loft above the single-story living space.

In the early days, the construction of the Water-Faring Community (Dan Jia)’s shack was very simple. At first, it was simply transformed into a residence after being dragged to the shore with an old boat that could not continue fishing. Later, it was developed into a

simple bamboo and wooden structure with a square top. Tall sheds are basically made of wooden bamboo. After dismantling the old ship boards, they are used to pave the ground. Coated with mats such as coconut leaves, bamboo leaves, and thatch leaves are used for “wrapping” on the periphery. Covered with thatched grass, it can shield the wind and rain. The doors and windows on the side are made of flattened bamboo. When it is built, a square frame is left at the outer half-height position. Above the box, the bottom is supported by a solid wooden stick, and then the gap is made tighter with an anvil and a hammer, which can become a simple and practical bamboo window that can shelter from wind and rain and lighting. Similar to the main building materials, the door of the shack is also made of bamboo. The door is not locked when going out. It is indicated by a bamboo that passes through the door. The folk customs are simple and not closed at night.

The door of the Water-Faring Community (Dan Jia)’s shack opens to the water. After the boat returns, it leans on the shore. The side facing the landing site is regarded as the back of the house. Generally, there is no open door. An open promenade is built on the waterfront side, which is convenient for the family to moor and enter. If there is a child in the house, a railing of about half a meter high will be set up with bamboo and wood on the water side, and a bamboo fence woven into the shape of a fishing grid will be laid to prevent children from falling into the water(as is shown in “Fig. 6”).



Fig. 6. Overwater shack in Da ap Fishing Village, Islands District, Hong Kong SAR.

^a Photographed by the author

The height of the pillars of the Water-Faring Community (Dan Jia)’s shack is also very particular. It is determined according to the local water surface and the tide height. The height from the floor to the top of the shack fence is generally between 2.3 and 2.5 meters. The height of dripping water from the top of the fence to the roof, based on the width of the house, is used to make a slope of 30 degrees. If the roof slope is too high, it is easy to be blown away by the typhoon along the coast. If it is too low, the light transmission is poor and it lacks aesthetics. If the slope is too gentle, it will easily lead to the seepage of the roof and it is not conducive to drainage of rain.

Later, some shacks also appeared with mixed materials such as abandoned iron sheets. For example, the Da ao fishing village shack near Lantau Island in Hong Kong SAR had a fire in July 2000. Nearly one fifth of the shacks that were burned and rebuilt after the fire were rebuilt with iron sheets and cement columns. The stilt houses in Da ao yi chong and er chong have a history of more than 100 years, and the new stilt sheds gradually formed in the 1920s. Until the early 1980s, the number of shacks was controlled and set by the government.

All the materials used to build shacks are simple, easy to obtain, and low-cost construction materials. This also reflects the long-term social discrimination and economic exploitation of taxation in the old family, resulting in low overall income and economic poverty. It is not easy to obtain bamboo and wood materials grown on shore.

C. Water-Faring Community (Dan Jia) Houseboat

In the old days, the Water-Faring Community (Dan Jia) lived in boats, and the boats they lived in were divided into homes, fishing boats, boaters, boaters, and so on. The Water-Faring Community (Dan Jia) often used boats as their homes. The length of each boat is about 3 to 6 meters. The longest is up to 10 meters, and the width is about 1 to 2 meters. In general, each small boat lives in a household, so it is also called a “family boat” (some places are also called “home boat”).

The structure of the Lianjia boat (means to connect the houseboats) is very delicate.

The traditional family boat is a wooden structure. It adopts buoyancy, waterproof and anticorrosive Chinese fir. Before construction, it will be immersed for a long time to carry out corresponding pest and disease treatment, and then paint the surface of the fir board. After the founding of the People's Republic of China, along with the improvement of people's living conditions, there was a family of ships poured with cement, similar to floating docks floating on the river. The stability of the water surface from the family structure of wooden structure to the family structure of cement structure has been further improved, which is also the improvement of the people's ability to adapt to resources and the environment (as is shown in “Fig. 7”).



Fig. 7. The cement structure family boat along the West River in Duanzhou Changpai Street, Zhaoqing.

^{a.} Photographed by the author

The deck of a family ship is generally divided into two layers, and the bottom layer (separated from the water surface) is in a vented state and is used to block water, also called a water barrier. Above the water barrier is the bottom tank(as is shown in “Fig. 8”), which is divided into two parts, the first half is used as a water tank for loading fish or storing food, and the empty part in the second half is used to store clothes and debris needed for daily life. At the same time, the weight of the bottom of the family boat can be increased to make it more stable when sailing against wind and waves. His family will also adjust the bilge of the family boat according to their current living environment. For example, the family boat in the river area has no water barrier and only the bilge, while the coastal area is slightly larger. Separate the bilge into more compartments according to the purpose of storage. Before the family boat used mechanical power, wind was needed during the sailing process, so there was a mast interspersed under the mast, and the sacrifices were enshrined under the mast. In modern newer family boats, there is no mast insertion. However, a bilge aft compartment was set up specifically for diesel engines.



Fig. 8. Wooden structure with family boat on the pier at Binjiang East Road, Qiaodong Market, Huizhou City.

^{a.} Photographed by Sina Guangdong: http://k.sina.com.cn/article_3950020044_eb7085cc00100b59h.html

Above the deck and under the Dan shack, the middle of the family boat is the only indoor space where the family lives. The rooms inside the ship are separated by wooden boards, and the doors and windows are also made of wood. In addition to the bamboo and wooden boards for the canopy, some materials such as linoleum cloth and iron sheets are added to make them more durable and waterproof. Some family ships also have their own “decorations” outside the cabins of the family, with lanterns hanging on one side and a few chickens or puppies, and bottomless carrying bags on the other side, which is convenient for the family to live. The most sacred place on the whole boat is the bow. The Water-Faring Community (Dan Jia) will post the Geely's couplet during the Spring Festival and pray that the new year will bring blessings and good luck to the people on the boat. The stern is the place where the family members

place stoves, which are mainly used for daily cooking and heating (as is shown in “Fig. 10”).

The family boat can be divided into large, medium and small according to the length and width (as is shown in “Fig. 9”):

- Large: 8 to 10 meters long and 2 to 4 meters wide. The middle and front cabins are divided into 3 to 4 sections, which are bedrooms for the elderly, sons, and daughters, and the general family has a large population;
- Medium: 4 to 5 meters long and about 2 meters wide, the middle and front cabins are bedrooms for the elderly and sons-in-law;
- Small: about 3 meters long and 1 meter wide, usually a couple or a couple living with minor children.



Fig. 9. A family boat with a fish and cargo compartment at the dock of Binjiang East Road, Qiaodong Market, Huizhou City.

^a Photographed by Sina Guangdong:
http://k.sina.com.cn/article_3950020044_eb7085cc00100b59h.html



Fig. 10. A family boat with an engine at the end of Binjiang East Road Pier, Qiaodong Market, Huizhou City.

^a Photographed by Sina Guangdong:
http://k.sina.com.cn/article_3950020044_eb7085cc00100b59h.html

The Water-Faring Community (Dan Jia)'s family boat is generally one boat and one family. After the children get married, a new family boat will be built to live separately from their parents, while the poor family has no conditions to build a new boat for their newlywed son. The two generations lived together in a larger family boat. The family lives in a narrow boat cabin, living a rough life with wind and waves, limited living and economic conditions, limited height of the

cabin, extremely simple furniture in the house, most of which are small “floors” and a small number of furniture. However, with the development of modern cities, some of the family ships will be moored in relatively fixed river sections, and the impact of wind and waves will be greatly reduced than before. More modern beds and cabinets will be added to the ships, and stoves such as liquefied gas stoves will be used. The family boat has gradually become a residential house floating on the water, which is not much different from the houses of residents on land.



Fig. 11. The houseboat that keeps puppies guarded.

^a Photographed by Beauty-The Last Floating Family



Fig. 12. Kitchen cooker compartment on a house boat.

^a Photographed by Beauty-The Last Floating Family



Fig. 13. Bedroom cubicles on the houseboat.

^a Photographed by Beauty-The Last Floating Family

IV. EVOLUTION AND CONSIDERATION OF SHIPBUILDING

The earliest Water-Faring Community (Dan Jia) boat was a boat similar to today's ferry. Later it gradually developed into a canopy with a sunshade and rain cover (as is shown in "Fig. 14"). Divided into houseboats based on the lifestyle of fishing or semi-fishing (refer to "Fig. 7") and a Water-Faring Community (Dan Jia) shack (refer to "Fig. 6"). Most of the Water-Faring Community (Dan Jia) water villages that are preserved today are mostly residential buildings made of Maoliao beside the river. The Dan boats have become a special tool for transportation, and the river is their main water network road. Large-scale water townships also include cane-based fish ponds and fruit plantations.



Fig. 14. Schematic diagram of a small boat with a sunshade on the roof.

a. Photographed by Dan boats" black and white illustration-zcool

V. THE EVOLUTION OF THE LIVING SPACE OF THE WATER-FARING COMMUNITY (DAN JIA)

In the past, the Water-Faring Community (Dan Jia) lived a life of drifting on the boat. By the middle of the Qing Dynasty, the Qing government issued an "Allow Guangdong Water-Faring Community (Dan Jia)" order, allowing "Dan people" to land and farm (as is shown in "Fig. 15" and "Fig. 16").

As a result, the talents of the Water-Faring Community (Dan Jia) turned to farmers in Shatian, and then reclaimed barren tidal flats and lived a life of half fishing and half farming. And their living space has also changed from boat dwellings to slightly more spacious shacks. Until now, the fishing boats of the Water-Faring Community (Dan Jia) have been transformed from abandoned ships, also with gradually improved economic conditions, a family boat changed from a narrow one-story one-bedroom houseboat to a houseboat or double-room shack that can accommodate a family with more than two cabins (as is shown in "Fig. 17" and "Fig. 18").



Fig. 15. Granny single boat house living on the waterfront.

a. Photographed by Huizhou WeChat public platform



Fig. 16. Granny single boat house living on the waterfront.

a. Photographed by Huizhou WeChat public platform.



Fig. 17. Schematic diagram of the interior space of a modern houseboat (two rooms).

a. Photographed by Rendez Vous Fantasia

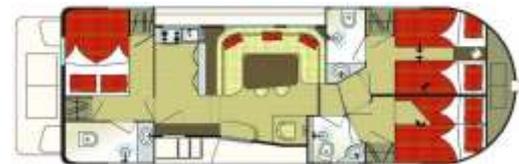


Fig. 18. Schematic diagram of the interior space of a modern houseboat (three rooms).

a. Photographed by Rendez Vous Fantasia.

VI. INHERITANCE AND PROTECTION OF WATER-FARING COMMUNITY (DAN JIA) BUILDINGS

the In 1967, the government implemented a "three-in-one" policy, that is, the government, collectives, and privately funded bungalows, so that the Water-Faring

Community (Dan Jia) had a fixed residence on shore. In addition, because of a stable life, the population gradually increased, and the space provided by the boat could no longer meet the needs of family life. Therefore, most of the Water-Faring Community (Dan Jia) members gradually settled ashore.

At present, there are fewer and fewer fishermen in the Water-Faring Community (Dan Jia). On the one hand, it is because young people are unwilling to engage in hard fishing. At the same time, the development of the tertiary industry on the shore provides more options for their work. The destruction of pollution and the depletion of fishery resources have affected the lives of the Water-Faring Community (Dan Jia). Now, most of the fishermen in the Water-Faring Community (Dan Jia) are older generations. The main reason is that the old fishermen have a low level of education and have only fishing skills. It is difficult to find a new job on the shore.

In recent years, the development of Fishing Village has gradually accelerated, which has caused the geology of the fishing village to be damaged, the water quality has been affected, and the aquatic products in its area have been contaminated. Therefore, in the process of urban and rural construction, it is necessary to further strengthen the protection of the fishing village environment (as is shown in "Fig. 19").

With more and more Water-Faring Community (Dan Jia) people living ashore, and the older generation of fishermen gradually withdrawing from the historical stage of fishing, the Water-Faring Community (Dan Jia) culture gradually died out (as is shown in "Fig. 20").



Fig. 19. Humen Xinwan Water-Faring Community (Dan Jia), Humen, Dongguan (closed fishing season).

^a. Photographed by Humen Tourism Net



Fig. 20. The 7th Water-Faring Community (Dan Jia) Culture Festival in Yantian, Shenzhen: Water-Faring Community (Dan Jia) Customs at Sea.

^a. Photographed by Yantianxu Urban Renewal

An important reason for the demise of the Water-Faring Community (Dan Jia) culture is the insufficient support from the government. In addition to providing appropriate assistance in treating the safety and subsidies of the people, the publicity and implementation of cultural development and inheritance have not been done well; another The reason is that there is still insufficient funding for the people. At the same time, the government must attach importance to the people and give them more support. In addition, many young people do not have a deep concept of the Water-Faring Community (Dan Jia) culture, and even as the descendants of the Water-Faring Community (Dan Jia), they know nothing about the Water-Faring Community (Dan Jia) culture.

For some parts or space in the damaged traditional Water-Faring Community (Dan Jia) houses in Guangdong-Hong Kong-Macao Greater Bay Area, scholars can carry out the digital inheritance of historical materials and the restoration of cultural relics through literature and techniques of artisans. In addition to this, related museums can try their best to collect and sort out relevant materials to avoid such cultural fault. Under certain conditions, with the help of VR, Sketch up and Lumion, a simulated 3d model can be built, so as to show the spatial layout and architectural composition of the garden more intuitively.

For students in higher education institutions, they should cherish the historical and cultural heritage of Water-Faring Community (Dan Jia) landscape. Besides, students need to propagandize the modern Lingnan architectural layout, style of art and culture, for example, through the field investigation of the historical garden and the practical teaching in colleges and universities, they can carry out relevant practical teaching activities, photography competitions, special exhibitions, lectures and workshops derived from the Water-Faring Community (Dan Jia), through which let more people know the historical changes and unique artistic features through the practice. On the other hand, people can carry out the in-depth study or participate in the practice activity of the management institutions of

existing modern and contemporary private Water-Faring Community (Dan Jia) in Guangdong-Hong Kong-Macao Greater Bay Area through multimedia teaching mode and the teaching of urban planning, architecture, landscape architecture, history and literature.



Fig. 21. Zhongjia Lianjia Boat in Banfu Town, Zhongshan.

^a. Photographed by Zhongshan Tourism Net, shot by Fang Yuling

As a local government, it is necessary to actively promote the inheritance and development of the Water-Faring Community (Dan Jia) culture, fully tap local historical and cultural resources, and add live local cultural materials to the construction of the international tourism industry. This is the significance of increasing the research and protection of the culture of the Water-Faring Community (Dan Jia).

The first is to increase the excavation and protection of cultural relics. Relevant departments in the province, especially the government, should include the rescue and protection of the Water-Faring Community (Dan Jia) culture in their work agendas, formulate plans, promptly set up projects, allocate special funds, and conduct a general survey of the material and intangible culture of the Water-Faring Community (Dan Jia) (as is shown in “Fig. 21”).



Fig. 22. Banfu Water Town Museum, Zhongshan.

^a. Photographed by Zhongshan Banfu Yingyue Haoting Yijia Garden Hotel Website

The second is to strive for various scientific research institutions and organizations mainly based on social science associations, and organize experts and scholars to study the history and culture of the Water-

Faring Community (Dan Jia), the demographic changes of the Water-Faring Community (Dan Jia), and the folk beliefs of the Water-Faring Community (Dan Jia) (as is shown in “Fig. 22”).

The third is to solve the research funding, shoot video materials of Water-Faring Community (Dan Jia) culture, record oral data, and publish related research results.

VII. CONCLUSION

Regarding the "urban heritage" produced by the Danjia settlement, most of the folk culture, performances, etc. have been included in intangible cultural heritage at different levels. However, in terms of architectural cultural relics, only Zhaoqing Gaoyao Jinli's wooden water ruins belong to Cultural relics protection unit. After all, the primary consideration of the protective planning update is the functional requirements of the Danjia settlement, and it can continue its own unique culture. Commercial development and tourism promotion are not necessary elements and preferred measures. Through the updated research of the water community, the thinking and possibility of future urban migration to water development can be introduced through its model.

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