

THE PRELIMINARY STUDY ON LANDSCAPE CULTURE ORIENTATION AND EXPLOITATION OF THE SOUTH DONGTING LAKE WETLAND

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ABSTRACT: Dongting Lake is internationally an important wetland. We studied and summarized the conception, function, classification and current situation of the wetland-landscape culture in this region. The results showed that the culture of Dongting Lake wetland was rich in diversity, which are the Rice Cultivation Culture, high-balustrade dwelling, Nuo Culture, Ship Culture, Dragon Boat Culture, Chu Culture, Ancient Architecture Landscape, Wetland Foodstuff and Cuisine Culture, Civil Art, Historic Heritage and Cultural Relics, Revolutionary Sites and Ruins, and Production and Living Culture, etc. We also evaluated the eco-tourism value of wetland landscape culture, and analyzed its features and orientation. The results revealed that the south Dongting Lake wetland plays a key role on the Changjiang(Yangtze) River reaches civilization and Chinese civilization, even has great influence on the global civilization. We summarized that the soul of the south Dongting Lake Culture was Wetland Culture, Water Culture, Rice Cultivation and Chu Culture. The thoughts, principles and approaches of sustainable exploitation and utilization of the wetland landscape culture were formulated and suggested.

KEY WORDS: south Dongting Lake ; wetland landscape ; landscape culture; eco-tourism; wetland culture

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1 THE FUNDAMENTAL CONTENTS OF LANDSCAPE CULTURE

The original meaning of landscape is the sum of natural scenery, physiognomy and scenic picture. Landscape has dual meaning of the synthesis of visible surface structure of a land or of a given land when it was used as a geographic and ecological term. Landscape means to be a geographic body, which is constituted of different land unit mosaics with unique visual features, and has the great value of economy, ecology and aesthetics (XIAO and LI, 1997).

Study on culture in landscape ecology stemmed from the academic symposium of the Holland culture and landscape in 1981. Since then, landscape culture research has been developing at a high speed, and its research field has been extended. Many achievements have been made, the interaction between human culture and landscape has been figured out for example. Cul-

ture convention intensively impacts the spatial pattern of habitation landscape and nature landscape (NASSAUER, 1995; NAVEH, 1991). Culture is the most unique symbol of a country or a region, the diversity of which would permanently exist and have enormous effect on society(JIA, 2001).

Landscape culture is considered to be composed of objective and non-objective parts. The object refers to physically visible thing, e.g. shape and structure, material things, etc. Landscape culture changes and creates the landscape, and the culture itself is embodied by landscape(XIAO and LI, 1997). Cultures consciousness is nonmaterial, but it is the fundament and life of landscape (XIA, 2000). Landscape culture can be classified into three levels: material culture, spirit culture and regulation culture (behavior culture). The three interact to form an inherent mechanism of culture development. The establishment of landscape culture helps to extend Landscape Ecology from a simple nature

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system to a nature-society-economy multiplex ecosystem and to the fields of the humane science which includes society, psychology and aesthetics.

2 THE LANDSCAPE CULTURE OF SOUTH DONGTING LAKE WETLAND

Being located in the north of Hunan Province and south of the middle reaches of the Changjiang River, Dongting Lake is one of the five largest freshwater lakes and one of the seven most important landscapes of international wetlands in China.

South Dongting Lake wetland is one of the first ten ecological protection demonstration areas and one of the most important water landscape fields in China. As a main component of the Dongting Lake, the South Dongting Lake National Wetland and Waterfowl Nature Reserve preserves the wetland eco-environment and the rare wild animals, for example, the migratory birds of winter or summer and the various ancient aquatic creatures (JIN *et al.*, 1998; LI, 1997).

South Dongting Lake wetland has not only very high visual aesthetic value but also is rich in diversity of landscape cultures. There were people lived in Dongting Lake region one hundred thousand years ago (XIAO, 2000).

It is the premise and base to evaluate and assess the ecological and culture resources for sustainable development, exploitation and utilization in the south Dongting Lake. Thus, we investigated comprehensively the ecological landscape culture resources of the south Dongting Lake wetland between March and April 2001, and we have achieved the preliminary accomplishments.

2.1 The Cradle of World Rice Cultivation Culture and the Oldest Seminary of Agriculture

In the south Dongting Lake region, our ancient people created the cultivation agricultural culture and established the substance foundation of the origin of civilization after undergoing long-term collection food and hunting. "The Big River Civilization" including the four big ancient civilization countries in the world is also called Wheat or Irrigation Civilization. Chinese civilization mostly concentrated in the region of the Huanghe (Yellow) River, Changjiang River, and Liao River (WANG and ZHU, 2000).

The south Dongting Lake region, well known as the country of fish and rice, is one of the oldest origins of the world rice agriculture civilization (JIN *et al.*, 1998). Human beings in this region had begun to

cultivate rice and create agriculture civilization over 20 000 years ago. The archaeological discoveries and the plentiful heritages of rice cultivation culture at the Neolithic Age showed that the world rice cultivation and its culture derived from the Changjiang River reaches in China. Furthermore, it revealed that the earliest origin place was south Dongting Lake region. From south Dongting Lake, the culture then transferred gradually to the other regions such as the Changjiang River, India, Southeast Asia, Korea and Japan (The Office of Yuanjiang County Chronicles, 1991).

2.2 High-Balustrade Dwelling Landscape

The local residential house has a distinct character in construction and decoration. The wetland water culture features and the folk-style high-balustrade architecture came of the emergence of the primitive residence living and rice cultivation agriculture at the Neolithic Age (CHEN *et al.*, 1999). The houses were constructed high above the ground by upright pillars, called high-balustrade dwelling. Those have a function of drying, ventilation and avoiding flood, animals, beasts, dampness, etc. It was a typical kind of residence architecture culture in the circumstance of hot summer, heavy rains, dampness, miasma and the beasts of prey (JIN *et al.*, 1998; The Office of Yuanjiang County Chronicles, 1991).

It have been found by archaeological studies that the technique and skills of high-platform-style construction were much higher than those of "semi-hole style" dwelling landscape culture in central China and of cave dwelling landscape culture in northwest China. The ancient people in south Dongting Lake wetland have invented and used the earliest "concrete" as a foundation of house in the world. The discovery of concrete not only had a significant importance in the field of world architecture materials but also reflected the excellent skills in the early south Dongting Lake region architecture culture.

Nowadays, we can still find those distinctive architecture dwellings, such as blue-brick-tile house, brick-thatched cottages, and bulrush-mud-wall houses, in the countryside. Those bulrush houses harmonize the nature, architecture environment and the spatial pattern, create circumstances of home, safety and harmony.

2.3 Cradle and Source of Nuo Culture

Nuo culture was sorcery religion culture and the

superstructure that was formed on the primitive landscape culture of rice cultivation civilization in the Changjiang River reaches 7000 to 9000 years ago (TUO *et al.*, 1989)

Nuo was a kind of totem and sacrifice of the rice cultivation nations and tribes in the Changjiang River reaches. Birds were regarded as the angel of God. People believed that birds helped them in tillage and provided them with rich harvest. As a primitive and ecological folk religion art, Nuo culture reflected the culture mentality and characters of nations, tribes and region. The general symbol system of Nuo culture, which was composed of the Sun, the Moon, the rice, the Solar God, the Bird God, flower and rice field, described society economy and ideology of that time, and accurately delivered abundant culture information.

2.4 Ship Culture and Dragon Boat Culture

Ship culture is one of the most dynamic and vigorous water cultures in the ancient civilization. The south Dongting Lake is one of the regions with the oldest ship culture in the world. It dated from Fuxi Era, 10 000 years ago (The Office of Yuanjiang County Chronicles, 1991). There were large-sized ships with wooden rudder to control the direction, which had navigated in the rivers and lakes 7000 years ago already. The Dragon Boat Race and the God-Welcoming Race are the typical religion ceremony to sacrifice to the Water God in south Dongting Lake. It is civilian culture tradition that people believe in the God and adore witches in the reaches over hundreds of years (JIN *et al.*, 1998).

There are the great religion racing ceremonies to welcome and enshrine the God to win a blessing in the starting of a business trip, fishing, rice cultivation traditionally. People there believe in the Water God deeply. They always hold a boat race with brandishing dragons, beating drums, striving to win the champion to welcome the God. People believe in the God so strongly that they think that dragon bones or the boat they win in the race will bring them great luck. There is always strong chasing between them, because people believe that the ship will get bless and superpower during the race. Dragon boat race was introduced to water army training in Chu State in the period of China Spring and Autumn Period and Warring States (770 B. C – 221 B. C.).

There is great difference between the north and the south China in landscape culture. The culture in the Central China belongs to “the culture of official historian

”, and the Chu Culture belongs to “the culture of official wizard”. Qu Yuan was the representation of “the culture of official wizard”. He lived in 340 B. C – 278 B. C, a great poet in China and even in the world, and was famous for his works like “The Lishao” and “Jiu Ge”. The Duanwu Festival, a folk customs commemorating QU Yuan by the Dragon Boat Race, is a traditional activity which is still opened once a year today. In the southern China, Dragon Boat Festival, which is also called “Five Lunar Festival”, “Duanwu Festival”, “Zhongzi Festival”, “Dragon Boat Day”, “The Poet Festival”, etc., is the second important festival after “The Spring Festival”.

2.5 Charm, Attraction and Diversity of Chu Culture Landscape

In the period of the Spring and Autumn Period and Warring States, the aboriginal culture in Dongting Lake and the mid-reaches of the Changjiang River synthesized with the central China culture and the south China landscape culture, and then formed into a native landscape culture, which was Chu culture (LI, 1997).

In Chu State, utensils were perfectly made with exquisite and model-unique design; the literatures were full of romantic, lively and fancy; the witchcraft came of the natural philosophy was full of quintessence and garbage. The Chu culture was widely divergent against the northern China mainstream culture as well as the other native cultures (DOU and JIANG, 2000).

Chu State existed over 800 years. Her material culture and systematical culture had ceased with the establishment of the Qing Dynasty. However, her custom culture has been lasting to today. The Chu culture landscape mainly includes the sites of Chu culture, historical stories, tales and myths, philosophies and religions, arts and literatures, customs, etc.

Taoism is the presentation of Chu philosophy. It features with the principal of unity of opposites, behavior following the law of nature and no disturbance to the nature, which is distinguished from the principal of Confucianism philosophy in Central China. Chu’s spiritual culture is very typical and its literature, painting, philosophy and belief are full of romantic flavor. While Central China culture is strictness and realistic, which is very different from the romantic and unconventional of Chu culture presented by QU Yuan (JIANG, 1990).

Lishao, a QU Yuan’s literature works, described a colorful, mysterious, glamorous visionary world based on the tales and myths of the Chu State, the historic figures, the sun, the moon, the stars, and clouds,

mountains, forests, land and rivers, fragrant flowers as well as birds and beasts. The religious music and dance of Chu are very graceful and emits dazzlingly brilliant and pronounces charming of the Chu State. The dairy life and production of Chu people were close connected with Chu songs. They sang and danced while they hold a sacrifice, celebration, banquet, wedding and funeral and festival, fight etc. Chu people admired the sun and the moon, and believed in the Emperor Yan. Phoenix is the totem symbol of Chu culture.

The material culture mainly includes the perfect, exquisite and model-unique music instruments, e. g. the suite of bells and chime stone, and food utensils, weapons, production tools, coins, Chu ancient city sites, mausoleum, bronze ware, silk fabrics, lacquer ware, handicraft, and so on.

2.6 Distinguishing Architecture in the Wetland

Being a special spatial art form, architecture is an important component of landscape culture. When it is in harmony with the natural landscape, it becomes a highlight of landscape. The ancient religion architecture, sacrifice and landscape architecture are usually the typical representation(The Office of Yuanjiang County Chronicles, 1991; Deng, 2000).

(1) The tower over the clouds (The Lingyun Tower). It is situated in the Myriad Sons Lake edge and was set up in 1793 in Emperor Qianlong Times, the Qing Dynasty, and built with granites. It is 30 meters high and is an inner-open—space-pavilion stone tower, with seven-storey and eight-angle in shape. Each storey is linked with another by the left-right-circle-ladder. With the elegant art model and exquisite technique, the tower over the clouds looks like grant and sobriety, which means to put down demons originally. Now it is the director of ships and one of the symbol landscapes of south Dongting Lake.

(2) The Lake-Squelch (Zhenjiang) Tower. Built at Zhujiazui in Xiaokuosai Lake in 1782, it is the most outstanding artificial symbol of wetland landscape scenery and is 23.95m high with seven-storeys and octagon shape. Its first floor is made of granites, the others are composed of blue bricks. In the old times, the tower originally means to uppress the flood genie and tame the flow of river.

There is a poem describing the beautiful view of the tower: “72 mountain’s scenery in the distance is in my eye sight, the beautiful waters and historical sites within 800 *li* are around.”. The picture of the lonely tower in the setting of rising and falling of the vast water is of

great momentum and emotion.

(3) The Eight-Angle Pavilion (The Kuixing Pavilion). It is the only ancient woody architecture in the Yuan River region, and is 15m high with three storeys and three eaves. The Eight-Angle Pavilion is the combination of the gracefulness of the ancient architecture of southern China and sobriety of the northern China. Each corner of eaves is upturned highly and glazed with an adornment, the first floor, middle storey and the top roof are respectively symbolized and decorated with dragon, phoenix and fish. The shape of pavilion is lively, natural and poised, with classic beauty and in elegant taste. Because of these features the pavilion has always been a tradition scenic place and a look-out.

2.7 Food Culture of the Wetland Landscape

The rich distinctive local food is well known, which is famous for its original, traditional and ancient taste, and it has full speciality of Xiang(Hunan) Cuisine. The following are the typical dishes in the region: the Loach holding Bean Curd, Asparagus Stew Fish, the Soup of the Day Lily and Meat; the Whitebait Soap, Stir-fried Eel and Malt & Pea, Local Flavor Lobster, Steamed Lotus Leaf Wrapped Chicken, Scrambled Seleng Wormwood and Bacon, Scrambled Purslane, Stewed Lotus Root, etc. (DENG, 2000).

Because of the legend that QU Yuan finished his works “Lishao” after eating the Seleng Wormwood Cake, it was fed with legend and mystery in the landscape culture then. There are also some local sweet dishes, such as Sesame Fragrant Cake, the Rice Cake, the tin of fermented soya beans fish, which are very tasty.

2.8 Folk Festival and Arts in Dongting Lake Wetland

The Dragon-Boat Race is the most distinct event and the most well known folk festival, which has an over 2300 years of history and a tradition of long standing (DENG, 2000).

The Dragon Boat is a dragon-figure and single-wood boat. There are 40 players, who are flag player, steersman, drummer, and oarsman. There are full of color flags and slogans on the dragon boat. The flag player gives the order to the drummer and does some performance on the stem, the oarsman paddles according to the beating on the drum. On the occasion of Boat Race, the sounds of drum and shouting make the boats speed up, which figure out an exciting and cheerful picture. There are different kinds of local traditional

performance with typical wetland styled arts, of which the following are the well known at home or abroad.

There are Flower Drum Drama (*Huagu Xi*), Fish Drum (*Yu Gu*), Three-Stick Drums (*San Bang Gu*), Lotus Flower Clipper (*Lianhua Luo*), Dihuang Dance, Lotus-Collecting Ship Dance, Mussel Dance, Lion-brandish, dragon-brandish, and so on. There are the folk legends such as the ZHANG Guo-lao (a famous immortal), YIN Liu-die (a legendary man), and so on.

2.9 Valuable Historical Sites and Culture Heritage

Lu Lake is famous for the saving story of QU Yuan in Chu's time. It was said that people searched for QU Yuan and found his body finally in the lake. Therefore, it was called "Lao Hu (rescue lake)". "Lao" in local dialect is pronounced similar with "Lu", thus the lake was called "Lu Hu" afterwards. QU Yuan liked Seleng Wormwood, "Li Hao" in Chinese, very much. He used to collect it while writing poem. It was said that the taste of Seleng Wormwood dish inspired him to write his famous poem, "the Lishao", and since then, Seleng Wormwood was called "the Li Hao" in this region. The "Li" is the first two character of "Lishao" and "Hao" is the name of Wormwood in Chinese.

There are many historical remains of the Yangyao Peasant Uprising in the South Song Dynasty: Caowei (Yangyao's army garrison place), Huangmao Island (Yangyao's army horse ranch), Saipuozui (a place Yangyao drying uniforms); the Son and Mother City (the bases of Yangyao's navy), South Dashan, North Dashan, Stone City Hill, Shiji Lake, and Shizigeng (a place where Yangyao sent his son who disobeyed the army and was condemned to death), etc. (DENG, 2000; DOU and JIANG, 2000;).

There are many ancient culture remains in this region. Of them the most famous one is the Chishan (Red Mountain) island, the remains of the Old Stone Age 100 000 years ago. There are Ming Lang Mountain Primitive Society Ruins, the South Jinshan Hill ruins of Yang-Shao culture of Neolithic, the Nan Hu (South Lake) Village Ruins of Neolithic, the Baweizi Neolithic Ruins, the Mammals Fossil Sites in the Son and Mother City (the first fossil unearthed sites in the plains tableland in Hunan Province), Shuixiwan (Long-Shan culture ruins), the Stone City Hill Ruins, the Houlonggang Harbor Ruins, the Son and Mother City Ruins, the Stone Carving Ruins of Ming Dynasty, the East-West Han Dynasty Tombs, the Ming Dynasty King Tomb in the Nanhu village and so on in the region.

Dongting Lake Museum is the biggest county-level

Museum in China. It has collected and protected a lot of rare and valuable historical cultural relics. Of them the South Dynasty's Celadon Figurine is on the first grade of the state precious relics, the Bronze Tripod of the West Zhou Dynasty the 2nd grade. There are the Painted Pottery Jar of the Song Dynasty, the Spitting Pot of the Tang Dynasty, the Polygon Jar of the Five Dynasty, the Tri-colored glazed Pottery Eight-Celestial-being Jar of the Yuan Dynasty, and so on (The Office of Yuanjing County Chronicles, 1991).

2.10 Revolution Commemorative Sites

In the past, Chinese Communist Party and her army were very active in this place. Nowadays we can still see the remains quiet often, for instance, the remains of the Dongting Lake Region Committee of the Chinese Communist Party (1932 - 1949), the remains of the Western Xiang-Er Special District Committee of the Chinese Communist Party and the remains of the base of Guerrilla Forces, etc. There are the Memorial Tower of the Cangjiao Massacre Tragedy (a Japanese crime), Duan-dechang Monument and the Dechang Park, and the like as well.

2.11 Customs of Production and Living

(1) The fighting against flooding. Yuan River City lies in the lowest region in the whole Dongting Lake region. There are often serious floods, so the fighting against flood and the rushing to deal with an emergency has become an important local activity which create a special landscape already. Flood watching is a season's task and has developed an informing system. The sound of the watchman's clapper means safe; the sound of a brass gong forecasts the coming of flooding and the light of a torch signalizes a collapse of dam or bank. It is an inspiring picture that the massive people activity of building and repairing the dam and bank in autumn and winter. From the hard and glorious experience in combating with the flooding in 1998 in Dongting Lake region, a spirit of contributing to the society was crystalized and has been accepted countrywide rapidly, that is "A Spirit of Combating with Flooding".

(2) The spectacular ceremony of the fishing opening. There were many traditional beliefs before liberation, meaning before 1949. For example, The fishing must be started at a "Luck Day". Thus, in fishing season, people chosen a given day to open the fishing season with a particular ceremony. In the ceremony, brass gong, drum and fireworks were employed together

with chickens, fish, and meat as a donation to the God in Dongting Lake to pray for a good harvest. On the day of opening, thousands of fishing boats joined together, the master cut off the head of a cock and sprinkled its blood on a fishing net to request the God's mercy for the fishing and a good harvest. Then all gun and firecrackers were fired, and all the boats set off in a sudden and competed to fish. Nowadays, this tradition is still kept but changed the content somewhat.

(3) Fishers' taboos. As a fisher, he is not allowed to say "fan (meaning turn over)", "cheng" and "chen" (meaning sink) and some words which have the similar pronunciation. People do not turn the fish over in a dish, and the fishers do not roll up their trousers legs even in the lake region.

(4) Foods. There are abundant aquatic foods in south Dongting Lake and the people like to eat fish and shrimps very much. There must be a fish dish in a banquet. "No fish, no banquet" is a particular tradition in the region. However, even so important fish is, it should not be served as the first dish and should be in the end, because of its pronunciation. In Chinese, fish pronounces "Yu", it has the same pronunciation of another Chinese word "Yu", which means "stupid" and "surplus". When it is served at the first on the table, it means "Chu Yu Chun", a stupid showing up. When it is in the end, it means "Nian Nian you yu", one will have surplus of food and money every year.

(5) Trip. People do not start a journey at the date with "seven", and not return home at the date with "eight". It said that when someone go for a business at the date with "nine", he would have no success from the trip.

(6) Festivals. "Duan Wu Festival", it is also called "Pu Yue Festival", is one of the most important and special festival in the region. People hold boat race, eat "Zhongzi" to celebrate it usually. They hang with calamus leaves as a sword and wormwood on the gate in order to keep the evils and illness away.

2. 12 Wetland Plants

Human beings have a close relationship with plant during the process of civilization. Plant influences the feeling and life of human and some of them gives special meaning to us. This kind of interrelation results in a culture phenomenon. A given plant has a special meaning to the people, which close relates to the local life style, production tradition and eco-environment. In Dongting Lake region, the plant landscape culture includes the culture of lotus which is symbolized pure-

ness, honesty and faith, the culture of food based on "the four precious vegetable", which are *O. Javanica* (BI.), Seleng Wormwood, asparagus and knotweed seed and originated from the story of QU Yuan, the culture of Xiang-Chu folk customs, the culture of reeds presented perseverance and solidarity and the culture of the grass in the Yueshan Mountain which led to a war between Qi State and Chu State in ancient China.

3 THE FEATURES AND ORIENTATION OF THE WETLAND LANDSCAPE CULTURE

3. 1 Importance

The wetland landscape culture in Dongting Lake has played an important role in the civilization of the Changjiang River reaches and of China, even of the world, which are rice cultivation culture, high-balustrade dwelling landscape, Nuo culture, and dragon boat culture, Chu culture, food culture, folk festival, and so on.

In September 2000, an old stone artifact which is 1750g, 17 centimeters long, 10.5 centimeters in width and 9 centimeters in thick, of at least 100 000 years ago has been found in the Chishan (Red Mountain) of south Dongting Lake Wetland. The discovery filled up the gap of archaeology on Old Stone Ages in Dongting Lake and carried the history of human beings in the Dongting Lake forward from 7000 to 100 000 years ago (XIAO, 2000).

It implied that there was human beings activity in Dongting Lake at least 100 000 years ago, which firmly showed the important significance of Dongting Lake in the Changjiang River reaches. The archeologists found subsequently another 8 pieces of old stone artifacts in the same place (XIAO, 2000).

In the 1990s, archaeologists discovered Rice and Cultivation Culture remains at the Neolithic Age in the Yuan River area. They found that the pottery and the its pieces from the remains were decorated with the figures of the sun, phoenix, and totem of human face with green-faced and long-toothed. Figure of the long-toothed face of Emperor Yan was always a main decoration of the Nuo culture in the temples in the southern China. The cultivation culture sites with these totems above belonged to the offspring's territory of Empire Yan.

In the early stage of Yangshao Culture in the Jiang River reaches in Shanxi Province, pottery was usually decorated with pictures of fishing and hunting. In the period of the middle of Yangshao Culture, the era of the Emperor Yan and Emperor Huang, the totems of Em-

peror Yan appeared gradually as decoration in Yangshao Culture. It implied that the culture of Emperor Yan was introduced, along the Han River reaches, from south Dongting Lake and the middle Changjiang River reaches to the northern China (JIN *et al.*, 1998).

In Chengtou Mountain, the reaches of Dongting Lake wetland, the archaeologists found a well decorated paddle. It was a symbol prop and implement merely used in the religious ceremony and in the dragon boat race for welcoming the Water God. In the same period in Zhejiang Province, the same style of decorated paddle and canoe were also unearthed in the Hemudu Culture remains. In other places, e. g. Changsha City, Qujialing Sites in Hubei and Guangzhou City, the unearthed relics decorated with pictures relating with dragon boat race were found as well. All those archaeological discoveries revealed the importance of Dongting Lake wetland civilization in Chinese civilization (JIN *et al.*, 1998).

3.2 Features

The wetland landscape culture in Dongting Lake region has unique features. Firstly, the landscape culture is rich in diversity and amount, widely distributed, with rich accumulation of long historical process and high level of civilization. The historical span was over 100 000 years. It has obvious and outstanding local characteristics and significantly differs with other types. Secondly, the wetland landscape culture has great value to scientific research, such as ecology, biology, architecture, archaeology, art, and education etc. The third, the landscape culture in south Dongting Lake is in nature closely connected with water and wetland. The cultures of dragon boat race, local food, dwelling architecture, historical remains, and the like are of the representation. Those features make south Dongting Lake wetland landscape culture have great tourism attractions and importance, and have high potential in eco-tourism and in science.

3.3 Landscape Culture Orientation

The landscape cultures are the soul of tourism and the core of tourism culture. It is composed of two parts, which are nature landscape resources and cultures landscape resources. Thus, the development of the wetland eco-tourism should pay attention not only to the natural landscape resource but also to the landscape culture resource. The orientation of wetland landscape culture should focus on "culture", not on landscape.

The exploitation of wetland must dig the content of culture. The natural resources and landscape are the carrier of culture.

The culture depends on and lies in the wetland environment. Thus, the main content of wetland landscape culture in south Dongting Lake region is the water culture, Chu culture and rice cultivation culture.

4 ECO-TOURISM AND LANDSCAPE CULTURE

4.1 Eco-Tourism Principles

Eco-tourism is an experiencing of tourist to an ecological system. During the touring, a tourist feels and learns something through practice of the content of the ecological system. The content of an ecological system is constituted by material part and non-material part. The culture goes mainly into the catalogue of non-material part. Therefore, to develop eco-tourism in wetland should set the landscape culture as a base. It is a best exploitation approach to the landscape culture to realize a change of the landscape culture to be an ecological resource (XIA, 2000).

Landscape ecology and sustainable development theory are the principles to conduct the exploitation of the wetland culture. The exploitation of the resources of wetland must take the protection into account.

South Dongting Lake has a long history and is a historical region with profound influence and significance. There are a lot of precious and unique local culture resources. The resources of wetland landscape culture should be brought into the Local Culture Development Strategy of the 21th Century. Sustainable development will keep the characters of local landscape culture and benefit economy, society, people, ecology and culture itself. Otherwise, we will suffer from the development and destroy all of the cultures and the resources (LI, 1997; GUO, 1999).

4.2 Strategy and Formulation

(1) A comprehensive ecological planning and concentrated exploitation. An ecological plan for the development on the whole must be worked out. According to the current situation and point of view of eco-tourism, the landscapes in the Chishan Island, Minglangshan Island and Yuanjiang scenic area should be the first places to be exploited to make them as a window of the whole wetland culture and to attract tourists' interests.

(2) Exploitation step by step. We must keep the original outlook of landscape culture, and respect the

local style, value and customs as possible as we can when we exploit them. The exploitation order should co-ordinate with the interests of tourist and the level of particularity in culture. Thus, the first destination for exploitation is the culture which has the first importance and attraction to the tourism, and when the first exploitation is successful and matured, the next one may start to be exploited. Exploitation must be conducted step by step. The worst situation is to exploit all of culture at the same time.

(3) Amusement and recreation harmonizing with the historical truth. Recreation and amusement are the attraction content of tourism. History is the life of the landscape culture. In exploitation, one should pay the same attention to both them. If the item of tourism has amusement but ignores the historical fact, it will not last long. When the item stresses on the history only and ignores the amusement, it is a historical school and loses the tourist attractions. Thus, a development of ecotourism of landscape culture should put the tourism attraction on the base of the history.

(4) The education and marketing of landscape culture. Fully developing marketing and education is the prerequisite of eco-tourism of landscape culture. We need to study the market orientation, education and advertisement strategy, propagation acceptance and resistant effects of landscape culture, and so on (SHANG *et al.*, 2000).

(5) Developing various landscape culture products. We should develop different types of eco-tourism in wetland landscape culture. Using the forms of painting, sculpture and opera and the like can show the historical story, myth, legend, literature works, religion, philosophy of local landscape culture, which will enhance the value of the culture in appreciation. It is also an important way to develop eco-tourism which increase the participation of tourist. We can develop tourists' interested way of education in eco-tourism, e. g., scientific spots inspecting, ancestor sites visiting sightseeing, water spots, going to holidays, going to expedition and water sports, etc. in the wetland.

(6) Ecological protection and management. The management is a decisive factor for the success of protection action. Then a modern and effective management system should be established at first. A landscape culture needs a protection in the level of ecology. A landscape culture consists of the nature events, historical events, social events, culture, customs, tradition and life style of people, environment, etc., which is not satisfied with any program of a single field. Thus an e-

cological protection program is the answer to realize sustainable development of the landscape culture.

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