

# **The Positive Influence of Ethnical Culture on the Environment**

**A Case Study in the Dong Village of Huanggang in Guizhou Province**

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Abstract: To transform the environment into a place suitable to live by utilizing ethnic culture is a problem that every ethnic has to solve in the process of adapting themselves to the environment. The transformation cannot be done overnight but will take great efforts. It's a long process in which the ethnic adapt itself to the environment and change the environment at the same time. However, when the transformation has consequently been done, the transformed environment will be beneficial to the ethnic not only materially but also spiritually. What's more, the environment in which the ethnic living is in good circulation, thus resulting in the ethnic living in harmony with environment.

Keywords: Cultural adaptation; Environment improvement; the Dong village of Huanggang

## **Chapter One Introduction**

Usually, the ideal habitat for Dong ethnic groups is the riverside. However, to fulfill such living conditions, the Dong ethnic groups, who live in the hilly dryland, managed to transform the arid land into water land by utilizing their traditional culture. Therefore, the Dong ethnic culture handed down. The Dong ethnic group made their living environment a combination of water land and hilly land in the following ways: improve their traditional stilted houses, divert rivers and then build fishponds within the villages; dig the hilly land into terraced fields and build weirs to keep water; improve the original trees of the primary ecosystem and cultivate fir trees in the hilly land. Finally, the Dong ethnic groups, who used to live in the riverside, made the transformation of settling in the humid mountains and forests, growing crops and planting trees. (LUO Kangzhi, 2012:45). The Dong ethnic groups largely extended the paddy fields in the hilly land, which lead to the flourish of lots of aquatic organisms in such hilly area as well. Besides the paddy rice, the number of aquatic animals and amphibians increased gradually in the artificial water land built by the Dong ethnic group. Birds habituating in the forests also went there to hunt for food, which increased the biodiversity there. Meanwhile, it is noticeable that the local people use and control the secondary forest ecosystem in a proper way because of an efficient management system. Therefore, even though the original ecosystem there has been modified by the Dong ethnic group, the ecosystem is still in a stable state, biodiversity here has been increased and the ecological landscape has also been built.

The reason why the Dong ethnic group could make this kind of transformation is that they made efforts to imitate the original ecosystem in the modification: they not only followed the natural rules, but also tried to restrict the modification. In the meantime, the Dong people maintained their artificial ecosystem by their efficient management system so that there is much consultive value to nowadays' ecological construction.

## **Chapter Two The Habitation Environment of the Dong Ethnic Group**

The key to improve the habitat of the Dong ethnic group is constructing their villages. The habitat for the Dong ethnic group is the riverside, but as time goes by, some of them have moved to the hilly area. The Dong people living in Huanggang are such an example. They live in the mountains with the average altitude of 700 meters and the highest point reaches almost 1100 meters. Although they left the riverside they used to live in, they inherited their traditional culture and made great efforts to transform the hilly dryland into the ideal water land.

The field research in the Dong village shows that the people there not only inherited the traditional culture but also made many innovations. In general, the people here can see water land and the forests in the mountains as well. And the combination of water land and hilly land can be seen in the following ways:

First, the Dong people in Huanggang rebuilt the stilted houses with the aim of

making them fit for the habitation environment in the mountains. The stilted houses were created by the ancient Dong people to avoid the risks that the constantly changing water level in the riverside may do great harm to the houses. The ground floor of the stilted houses has been used as stalls instead of leaving the room empty. The Dong people put wood floors in the stalls to avoid the cattle standing in the water at night, and keep the ground floor a foot from the ground with the aim to leave space for the cattle to drink and move. By doing this, even though many wild animals co-existed in the area, they would not attack the cattle in the stalls. In the first floor, the Dong people made the floor solid but left some space between the boards in the walls. They narrowed and covered the corridors, and made the stairs face the fishponds and designed with the back to the mountains. Therefore, even the stilted houses are built in the valleys, the air flows across the stairs if only the temperature in the fishponds and mountains varies slightly. The bedrooms on this floor are kept in a negative pressure environment by air suction. What's more, mosquitoes and fog are also kept away from the bedrooms which make the bedrooms dry and comfortable. The utilization of the second floor is different from that in the riverside. The second floor is used as living rooms instead of storage. The purpose of building houses like this is not only to keep the houses warm but also to heat the air so as to get rid of the humidity in the lower floors through the vents in the roof. By doing this, people feel comfortable in the houses and the grains in the loft are kept from going moldy. In addition, the space between the boards in the walls varies from different floors. There's much space in the walls of the stalls on the ground floor, little space in the walls of the bedrooms on the first floor and nearly no space in the walls of the living rooms on the second floor. Thus a high-pressure zone has been created within the house and the air was drawn upwards. All these innovations seemed to be modest, however, they made people live comfortably, kept the wild animals and the fog away from the house.

Second, the Dong people usually build the village near the water land and make the village the water land in the front and mountains in the back. The Dong people built Huanggang village just in such way and also made some innovations. The Huanggang village is located in a mountainous basin, with 3 streams flowing through it, which made it very difficult for the Dong people to get a wide horizon as the ancestors used to do. Therefore, the Dong people made innovations in the constructing of Huanggang village. They transformed the hilly dryland into many fish ponds by building weirs, diverting rivers and digging fish ponds. Though the fish ponds are built in the mountain and they are not at the same altitude, there are so many fish ponds and the houses are built around the fish ponds that the Dong people can also get a wide horizon just as their ancestors did. The houses are connected by trails in the mountains and there is plenty of sunshine in every room in the houses. With water land in the front and mountains in the back, the perfect location of the Huanggang village not only enriched the landscape of Dong's habitation environment, but also kept environment in a stable state.

Third, the Dong ethnic usually set public space in the corridors and balconies, but the Dong people in Huanggang set public space in the drum towers and gallery

bridges, where many stone steles and the altar are built there. By doing this, the Dong ethnic of Huanggang kept the tradition of setting public space just like those Dong people living in the riverside, and at the same time separate the public space from the living quarters, which leads to much larger public space and more people can gather together.

Overall, the Dong ethnic inherited its tradition and made innovations in the construction of the Huanggang village; they kept living in the water land and enriched the landscape of the habitation environment as well.

### **Chapter Three The Re-distribution of Water Resource**

There is plenty of water resource in the riverside, and the Dong ethnic there only worries about how to use the water resource efficiently—the nature helped with the interception, storage purification and renewing of water. However, it is totally a different case in the Dong village of Huanggang. The village located in the hilly land where rainfall is abundant but water run off the rugged mountains fast. To construct a water land for habitation, people should try to intercept and store rainwater and speed up substance circulation then reach the goal of water purification and renewing. People in Huanggang village redistribute the water resource there by building ponds and terraced fields.

Though the ponds in Huanggang vary in shape and function, in a word, they are built to intercept and store rainwater, enrich the landscape and purify water resource. It is a typical sub-tropical mountainous forest area with high mountains, thick forests and abundant rainfall there. However, it is very hard to intercept and store rainwater because of rugged mountains - the rainwater run off quickly towards downriver. To redistribute the water resource there, the Dong people in Huanggang tried every method to construct ponds within their habitation environment: build weirs in the natural watercourse; digging canals to transfer water into low land; or just digging ponds; or even divert the river and then the beach land naturally became ponds. The Dong people can not only keep fish but also beneficial other ways. Being constructed in the slope or at the source of streams, ponds are used to intercept and store water; being constructed in the paddy fields, ponds are used to adjust the water level of the paddy fields. There are some small dams to keep water level in a stable state and stop fish from escaping. Being constructed within the village, ponds are used to keep breeding stocks, grow aquatic plants to purify the water and enrich the landscape.

Generally speaking, constructing these ponds means the transformation of the local environment. Its aim is to intercept the water resource to the most extent and then store the water in the ponds. A large number of ponds equal to a large number of mini reservoirs, which redistribute the atmosphere precipitation: store water in the wet seasons, get water in the dry seasons and keep the water level of downriver as well. The construction of these ponds makes the Dong ethnic groups living in the mountains can also maintain the habitation environment just as they used to do in the riverside.

Dong people living in the riverside, often concern little with the sewage purification for the polluted water would be rushed away quickly. However, Dong people in Huanggang acted differently. There's little water resource in Huanggang, what's more, water there easily gets polluted. Dong people have to solve this problem by manual intervention—purifying the water in the ponds in the villages is the most

difficult part.

Local people are very wise to purify sewage by affecting species in the pond ecosystem. They defined the ponds just as the produce base of breeding fish, adult fish in the breeding stock needed plenty of food, thus fish raised in the ponds within the villages can help get rid of organic waste by getting food from it. Local people also built toilets over the ponds, and then fish can live on the excrement of human and livestock and help break down the organic waste. However, this caused eutrofication for the waste fish excreted lead to more fertilizer and less oxygen in the water of the ponds within the villages.

To solve this problem, Dong people grow aquatic plants like *lemna minor*, *zizania aquatic*, *oenanthe javanica* and water hyacinth in the ponds, and then feed the pigs with these plants. By doing this, the nutrients can be transferred from the ponds into land, which decreased eutrofication and increased oxygen in the ponds. In this process, sewage is purified and ponds are utilized in multiple ways: they are not only a base of fish breeding, forge plants and vegetable production, but also the important continents of water ecosystem. With the aim to increase the oxygen, every year before fish breeding, Dong People dig out the silt from the bottom of the ponds, dry it up in the sunshine and then carry it to the paddy fields to be used as fertilizer. After taking away the adult fish, local people raise some domestic waterfowls like ducks and geese in the ponds, which helps to improve the nutrients cycling, enrich the oxygen and clear away other aquatic animals. All of these lead to a healthy environment of fish. Due to such proper manual intervention, the pond environment is in sustainable circulation despite being located within the villages.

The suitable environment for cultivating paddy rice is in the riverside, thus it is obviously not the ideal place to grow rice in Huanggang. But with its unique culture and village rules (LUO, 2012:9), Dong ethnic in Huanggang constructed a large area of terrace in the slopes and valley. There are various methods for constructing terrace fields, such as building dams on the river and the accompanying warp soil is a good source for constructing paddy rice fields; diverting the rivers and making the river shoal into terrace fields; piling stones and filling soil to build terrace fields in hilly areas; even digging slopes and piling stones soil to build large terrace fields; or building terrace fields on the top of the mountains. However they build the terrace fields, the goal is to trap atmospheric precipitation, store and control the water resource.

Besides the re-allocation of water resource, the terrace fields of Huanggang village act another role in the re-allocation of the water environment. Due to the hilly area of the Dong ethnic living in, it is very difficult to trap and store water resource – even though with plenty of rainfall amount, it is still a restriction for planting paddy rice. To solve this problem, the Dong ethnic tired the following 4 ways: First, each paddy field must be soaked the whole winter for about 10 to 15 years, after that, it can be left dry for 1 or 2 years, with the aim to fertilize the soil and descend the organic materials. It is really a efficient strategy to avoid the risk of poor harvest due to late rains of the next year. Second, terrace fields here are all with high and tall ridges around, with which can trap and store the rainfall to the most extent and ensure enough water in the whole growth progress of the paddy rice. But the problem is that too much water for a short time will cause harm to the paddy rice. Dong's solution is that they selected 13 common paddy rice and 10 optional paddy rice. What these kinds of paddy rice have in common is that they all have high and hard stem, can live in the terrace fields where the water is about 0.5 meter high and will cause no harm to the harvest. Therefore, every paddy field here is not only a produce base, but also a

micro reservoir and a natural reserve. All these are due to the terrace field and human allocation to trap, store and purify the rainfall.

The Dong ethnic is an ethnic who loves to live in the riverside, the steady statue of the riverside is the symbol of an excellent human habitat environment, but the Dong ethnic in Huanggang village is living in the forests of a hilly area. Though it is a disadvantage for them to live, there is a talent of Dong ethnic culture of adapting itself to the new environment by means of properly allocating the water resource. By doing this, it not only satisfies the traditional needs for water resources, but also traps, stores and purifies water resource to the most extent. The human habitat environment is the similar to that of the riverside, and the efficient human allocation has also been done. On account of the human intervene, the water environment in Huanggang village is more active and lively than in the riverside.

#### **Chapter Four Conclusion**

The construction of different human habitat environment is certainly a reconstruction process of the local ethnic culture to the original environment. In this process, the whole Dong's cultural characteristics and environmental restrictions have been satisfied and inherited to the full extent, and some new content of the mountain ecosystem has also been added. Therefore, the Dong ethnic living in Huanggang village is inheriting the culture from the Dong ethnic living in the riverside and at the same time making their innovation, which results in the human habitat environment in Huanggang villages is more convenient than the riverside for people to live in, the biodiversity is also enriched by such kind of environment. All in all, the habitat environment has been greatly improved by the Dong ethnic in Huanggang.

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