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From the perspective of world heritage, the strategy and sustainable development of the mushroom co-cultivation system in Qingyuanlin (Zhejiang)

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Abstract:

The Qingyuan Forest-Mushroom Co-culture System in Zhejiang Province, China, located in Qingyuan County, Lishui City, was recognized as a Globally Important Agricultural Heritage System (GIAHS) in 2022. In this study, the author compares the selection criteria and characteristics of the "Zhejiang Qingyuan Forest-Mushroom Co-cultivation System" with those of other World Agricultural Heritage sites. Through an in-depth analysis of the uniqueness of the "Zhejiang Qingyuan Forest-Mushroom Co-cultivation System" and its ecological, economic, and cultural values, the author aims to reveal its advantages in the World Heritage List and explore reasonable ways for its sustainable development.

Keywords: Zhejiang Qingyuan Forest Mushroom Co-cultivation System, World Heritage Perspective, Agricultural Cultural Heritage, World Heritage Strategy, Sustainable Development

1. Introductory

World heritage is a blend of cultural and natural elements, embodying the essence of human history, culture, and civilization. It represents humanistic landscapes and natural landscapes of great value, and is a common precious treasure of mankind. World heritage possesses scientific value, aesthetic value, historical and cultural value, and tourism value [1] [2]. In September 2023, the 45th World Heritage General Assembly was held in Riyadh, the capital of Saudi Arabia. The World Heritage Committee of UNESCO inscribed 1,199 World Heritage properties in 168 States Parties on the World Heritage List, including 933 cultural, 227 natural, and 39 mixed properties. Agricultural cultural heritage is an important part of World Heritage, and China, as a major agricultural country, has 22 projects inscribed on the list of Globally Important Agricultural Heritage Sites (GIAHS) by 2024, ranking first in the world. Two of these projects have agricultural landscapes inscribed on the World Heritage List.

Situated in the hilly terrain of Zhejiang Province's southwest, Qingyuan County ranks among the top 17 biodiversity-rich regions in China. The Qingyuan forest-mushroom co-cultivation system is one of China's 22 globally important agricultural cultural heritages. Its main agricultural products include shiitake mushrooms (also known as Lentinus edodes), which is the birthplace of shiitake cultivation technology and a base for the transmission and dissemination of forest-mushroom co-cultivation technology and culture.

2. Overview of the location of the joint forest and mushroom co-cultivation system in Qingyuan, Zhejiang Province, China

Zhejiang Province, with its unique landscape of "seven mountains, one water, two fields," boasts rich forest resources. The province's forest coverage rate stands at 61.27%, ranking first in the country. [3] Qingyuan County is situated in the southwest of Zhejiang Province (Figure 1). It lies between 27º25′ and 27º51′ north latitude and 118º50′ and 119º30′ east longitude. The total area spans 1898 square kilometers. The terrain belongs to the mountainous region of southwestern Zhejiang, encompassing diverse landforms such as stream valleys, basins, hills, and high mountains, with the landscape sloping from northeast to southwest. The eastern and northern parts of the county are surrounded by the Donggong Mountain Range, characterized by high mountains and steep slopes in deep valleys. The climate is subtropical monsoon, featuring warmth and humidity across four distinct seasons. Generally, winters are not severely cold, and summers are not excessively hot. The forest coverage rate is remark-

ably high, reaching 86.35%, earning Qingyuan County the reputation of "China's ecological environment, the first county." [4]

In terms of localization, the eastern and northern regions of Qingyuan County experience lower temperatures than the southwest and central parts. They have shorter frost-free periods, large temperature differences between day and night, and sufficient rainfall, which are highly conducive to the growth of mushrooms like shiitake. This provides an excellent ecological environment for the cultivation and growth of shiitake. [5]

Qingyuan County is the birthplace of the world's artificial cultivation of shiitake mushrooms. 800 years ago, Wu Sankong, a villager from Longyan Village in Qingyuan County (also known as Wu Yu), the originator of shiitake mushroom cultivation, inadvertently discovered that fungal spores dispersed in the air could grow shiitake mushrooms on decaying wood with knife marks. After repeated experiments, he explored and summarized the ancient cultivation technique of shiitake mushrooms, known as the "Chopping Flower Method," which marked the first step in the artificial cultivation of shiitake mushrooms. He pioneered the cultivation of shiitake mushrooms using this ancient technique. [4] Later, due to the mountainous environment of "nine mountains and half water, half fields," the shiitake mushroom became one of the agricultural products relied on by local farmers to sustain their livelihoods. [6]

Figure 1. Geographical location of Qingyuan County

Note: This map is based on the standard map with review number GS(2023)336 downloaded from Ove Interactive Map Software, and the base map has no modifications.

3. Analyzing the World Agricultural Cultural Heritage alongside the Forest and Mushroom Co-cultivation System in Qingyuan, Zhejiang Province, China

3.1 Comparison of World Agricultural Cultural Heritage

The concept of agricultural cultural heritage encompasses a framework for the use of land resources and the creation of agricultural terrains, shaped by prolonged co-evolution and active adaptation among rural regions and their surroundingsAgriculture plays a very important role in human survival and development. Agricultural landscape is a special type of landscape produced by human beings in transforming nature. It sends the human reverence for nature, the wisdom of adapting to local conditions and the hard work of laboring day and night, and serves as a testament to the harmonious existence between humans and the natural world, and is an outstanding representative of regional culture. [7][8]

As of 2022, the World Agricultural Heritage Program lists some 50 different heritage sites covering a wide variety of agricultural traditions and cultures across the globe. Nine agricultural cultural heritages were selected from the World Heritage List, including the Cultural Landscape of the Ancient Tea Forests of Mount Jingmai in Pu'er and the Hani Terraces of the Honghe River in China, the Rice Terraces of Cordillera in the Philippines, the Afraj Irrigation System in Oman, the Terraces of Lavaux Vineyards in Switzerland, the Agricultural Landscape of the island of Södertälvärland in Sweden, the Archaeological Landscape of the Earliest Coffee Plantations of the South-East of Cuba, the Cultural Landscape of Coffee in Colombia The Early Agricultural Site of Kuko, Papua New Guinea.

The distribution of the above agricultural cultural heritage on the world map is shown in Figure 2, the approximate location of the selected agricultural cultural heritage can be seen from the figure, and the selection criteria and heritage characteristics can be seen in Table 1. The World Agro-Cultural Heritage sites have formulated relevant laws, regulations and management methods to protect local agricultural cultural heritage, and the names of the laws and regulations is shown in Table 2.

Figure 2. Map of the distribution of the World Agricultural Heritage Site

Note: This map is based on the standard map with review number GS(2023)336 downloaded from Ove Interactive Map Software, and the base map is not modified.

Point data refer to the official UNESCO World Heritage website http://whc.unesco.org/.

Table 1 List of World Agricultural Heritage Sites

name (of a thing) Name	nations Country	Selection time Time	Selection criteria Criteria	Heritage features Features
Pu'er Jingmai Mountain Ancient Tea Forest Cultural Landscape Cultural Landscape of Old Tea Forests of the Jingmai Mountain in Pu'er	sino China	2023	(iii)(v)	Core area: 7,167.89 ha Buffer: 11,927.85 ha Geographical coordinates 22°11'3''N, 100°0'27''E The Pu'er Jingmai Mountain Ancient Tea Forest Cultural Landscape is located in Jingmai Mountain, Yunnan Province, China, and has been cultivated by the local Brown and Dai ethnic groups for more than a thousand years, following practices that began in the 10th century. It is a tea country, with several traditional villages surrounded by forests and tea plantations hidden among the ancient tea trees.
Honghe Hani Terraces Cultural Landscape Cultural Landscape of Honghe Hani Rice Terraces	sino China	2013	(iii)(v)	Core area: 16,603.22 ha Buffer: 29,501.01 ha Geographical coordinates 23°5'35.8''N, 102°46'47.93''E The Hani terraced cultural landscape area of Honghe in China is 16603 hectares, distributed in the southern part of Yunnan. Its characteristic is the spectacular terraced fields that pour down from the slopes of the towering Ailao Mountains to the banks of the Honghe River. Over the past 1300 years, the Hani people have developed a complex canal system that transports water from forested mountaintops to terraced fields.
Afridi Irrigation System, Oman Aflaj Irrigation Systems of Oman	Omani Oman	2006	(v)	Core area: 1,455.949 ha Buffer: 16,404.33 ha Geographical coordinates 22°59'56''N, 57°32'9.8''E As early as 2500 BC, the Afraji irrigation system in Oman existed in this extremely arid region. By utilizing gravity, water is transported from underground sources or springs to support agriculture and household use.
Rice terraces in Cordillera, Philippines Rice Terraces of the Philippine Cordilleras	Philippine Philippine	1995	(iii)(iv) (v)	Geographical coordinates 16°56'2.004''N, 121°8'12.012''E The rice terraced fields in Cordillera, Philippines rely on the natural contours of hills and mountains to form terraced pond fields. In addition, the development of a complex irrigation system that draws water from mountaintop forests, as well as its carefully designed agricultural system, reflects its proficiency in engineering and is still appreciated today.

Lavaux Vineyard Terraces Lavaux, Vineyard Terraces	Switzerland Switzerland	2007	(iii)(iv) (v)	Core area: 898 ha Buffer: 1,408 ha Geographical coordinates 46˚29’31’’N, 6˚44’46’’E The terraced fields of Lavaux Vineyard extend about 30 kilometers along the north bank of Lake Geneva facing south, from Castle Chiron to the eastern suburbs of Lausanne, Va., covering the slopes between the village and the lake.
Agricultural landscape of South Upland Agricultural Landscape of Southern Öland	Sweden Sweden	2000	(iv)(v)	Core area: 56,323 ha Geographical coordinates 56˚19’30’’N, 16˚28’59.988’’E The southern part of Ö land is an island in the Baltic Sea off the southeast coast of Sweden, mainly controlled by a vast limestone plateau. People lived there for about 5000 years, adapting their way of life to the restrictions on the island. Therefore, the landscape here is unique, and from prehistoric times to today, there is a wealth of evidence that humans have been continuously settling.
Cultural Landscape of Colombian Coffee Coffee Cultural Landscape of Colombia	Columbia (District of, or University, etc) Colombia	2011	(v)(vi)	Core area: 141,120 ha Buffer: 207,000 ha Geographical coordinates 4˚53’22.114’’S, 75˚46’23.095’’W The Colombian coffee cultural landscape represents a powerful symbol of coffee growing regions around the world, including six agricultural landscapes, including 18 city centers located in the western and central foothills of the Andes Mountains in the country. It reflects the tradition of planting coffee on small plots of land in high forests for hundreds of years, as well as how farmers adapt to harsh mountainous conditions.
Archaeological landscape of the earliest coffee plantations in southeastern Cuba Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba	embargo Cuba	2000	(iii)(iv)	Core area: 81,475 ha Geographic coordinates 20˚1’48’’N, 75˚23’29’’W The remains of 19th century coffee plantations in southeastern Cuba are unique evidence of pioneering agricultural forms in difficult areas. They provide considerable clues to the economic, social, and technological history of the Caribbean and Latin American regions.
Early agricultural site of Cuco Kuk Early Agricultural Site	Papua New Guinea Papua New Guinea	2008	(iii)(iv)	Core: 116 ha Buffer: 195 ha Geographical coordinates 5˚47’1.36’’S, 144˚19’54.2’’E The Kuk early agricultural site is located in the western highlands of New Guinea, at an altitude of 1500 meters, consisting of 116 hectares of swamps.

Note: The data in this table are referenced from the UNESCO World Heritage Committee website http://whc.unesco.org/ http://whc.unesco.org/.

Table 2 Overview of the conservation and management of World Agricultural Heritage sites

Name	Country	Laws, regulations, or regulations
Cultural Landscape of Old Tea Forests of the Jingmai Mountain in Pu'er	China	Plan for the Conservation of the Cultural Heritage toward the Old Tea Plantations of Mount Kyungmai as a National Priority Reserve (2017-2035) Village Plan for Mount Kinmai (2019-2040) Management Plan for the Protection of the Cultural the Old Tea Forest's Landscape in Pu'er Jingmai Mountain (2020-2040)
Honghe Hani Terraces Cultural Landscape	China	Measures for the Protection and Management to the Cultural Landscape Villages and Houses of the Red River Hani Terraces Guidelines of the Protection, Rehabilitation and Environmental Management of the Traditional Habitat of the Red River Hani People Measures for the Protection and Management to the World Cultural Heritage
Afridi Irrigation System, Oman	Omani	Aflaj Organization and Protection Act Water Protection Act Act on the Protection of Drinking Water Sources from Pollution Heritage Protection Act Law on Agricultural Systems
Rice Terraces of the Philippine Cordilleras	Philippine	
Lavaux Vineyard Terraces	Switzerland	
Agricultural Landscape of Southern Öland	Sweden	National Heritage Act Planning and Building Act Environmental Law
Archaeological landscape of the earliest coffee plantations in southeastern Cuba	Cuba	

Note: The data in this table are referenced from the UNESCO World Heritage Committee website http://whc.unesco.org/ http://whc.unesco.org/.

3.2 Overview and characterization of the co-cultivation system of forest and mushroom in Qingyuan, Zhejiang, China

The Zhejiang Qingyuan forest-a-mushroom co-culture system is located in Qingyuan County, Zhejiang Province, China, with a core area of 13 administrative villages and one state-owned forest farm in Songyuan Street, Baishanzu Township, and Wudaibao Township, with a geographic position of longitude 119°03'18"-119°15'04" East and latitude 27°39'04"-27°51'12" North (Fig. 3).

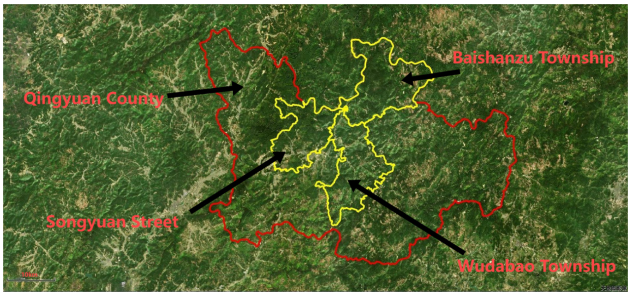

Figure 3. Geographic location of the core area

Note: This map is based on the standard map with review number GS(2023)336 downloaded from Ove Interactive Map Software, and the base map is not modified.

For a long time, the residents of the heritage site have

developed the edible mushroom industry through the utilization of forest resources and established a composite production system centered on the forest-mushroom co-cultivation technology. In this system, forests, terraces, villages and rivers harmonize with each other to form a rational land use pattern and ecological landscape. The forest not only provides residents with traditional edible mushroom production sites and raw materials for edible mushroom cultivation, but also undertakes important ecological functions, such as soil and water conservation, water conservation and climate regulation. The terraces provide residents with crops such as grains and vegetables while receiving and processing the waste from mushroom production. Villages, on the other hand, serve as centers for residents' livelihoods and the processing of agricultural and forestry products, while rivers satisfy the need for water for production and domestic use, and are also used as transportation corridors. These components coordinate with each other to maintain the stability and sustainability of the ecosystem.

On November 4, 2022, the Zhejiang Qingyuan Forest-Mushroom Co-cultivation System was officially approved to be inscribed on the list of Globally Important Agricultural Cultural Heritage (GIAHS). As the only agricultural cultural heritage in the world that focuses on edible mushrooms, the Zhejiang Qingyuan Forest-Mushroom Co-cultivation System fills the gap of GIAHS in the field of eatable mushrooms. As an agricultural cultural heritage focusing on edible mushrooms, its heritage features are distinctly different from other agricultural cultural heritages.

Table 3 Heritage characteristics of a mushroom co-cultivation system in Qingyuanlin, Zhejiang

Category	Heritage features Features
agrarian economy	Through diversified production methods such as forest resource cultivation and utilization, collection of forest wild resources, farmland and forest farming, forest-farming intercropping and set-planting.The residents of heritage sites produce a variety of agricultural, forestry, animal husbandry, and fishery products, such as edible mushrooms, trees, nuts, fruits, oilseeds, traditional Chinese herbs, grains, yams, vegetables, and aquatic products, which safeguard the local people's needs in terms of food, nutrition and daily life. On this basis, new business forms such as agricultural experience, cultural education and eco-tourism have been extended, and traditional industries and new business forms have been continuously integrated, greatly improving the output of agriculture and the income of farmers, and meeting the needs of the people's rising standard of living. Under the co cultivation system of forest mushrooms, farmers accounted for 46.9% of their income and were the most important source of livelihood.
Agricultural biodiversity	The heritage site has a large area of native or semi native forest vegetation, preserving a large number of primitive and ancient biological populations. It is rich in animal and plant resources, including rare and endangered species. Heritage sites are important fungal resource bases in China, with abundant wild fungal resources and strong genetic diversity. 398 species of large wild fungi have been identified. The advantageous geographical location and climatic conditions of the heritage site are suitable for the growth of various crops. Currently, there are about 60 cultivated crops, many of which are traditional local varieties.

Agricultural production technology	Mushroom culturist have achieved organic integration of forest protection, mushroom cultivation, and agricultural production through traditional knowledge and technologies such as natural forest protection, mushroom forest management, forest and understory resource utilization, edible mushroom cultivation, and resource recycling in production practice. The waste resources such as forest logging residue, farmland straw, mushroom residue, animal and poultry manure formed in the production process have all been resourceful and utilized, which is a typical ecological recycling agriculture mode, and the whole production process and post-production processing and utilization have not discharged any waste into the environment, so as to achieve comprehensive utilization, recycling and green utilization. It is also the birthplace of the artificial cultivation technology of shiitake mushrooms in the world, and has preserved the complete evolution chain of edible mushroom cultivation technology from the flower chopping method to the wood segmentation method and then to the substitute material method, which can be called "the living museum of eatable mushroom cultivation technology".
agrarian culture	Mushroom people in the heritage site have been working in the deep forests for generations, creating unique languages and customs, weaving a large number of songs, proverbs and legendary stories full of mushroom township flavor, expressing the bitterness and happiness of mushroom production, reflecting the production, life and struggle with nature of mushroom people, and deriving the forest ecological culture and mushroom culture with unique local characteristics. The most typical ones are nature worship centered on forest reverence, such as worshiping the mountain god and recognizing the tree lady; ancestor worship centered on sacrificing the "mushroom god" Wu Sanguang, such as the mushroom god temple and the Western temple; folk customs focused on the secrecy and inheritance of cultivation technology and personal safety protection, such as the mushroom mountain dialect and mushroom kung fu; and the adaptation to natural conditions, harmonious interpersonal relations and convenient market trading, The bridge architecture focuses on adapting to the natural conditions, harmonizing interpersonal relationships and facilitating market transactions; and the triad halls and mushroom houses focus on cooperation and mutual assistance.
Agricultural landscape	The landscape types of heritage sites are diverse, with forests being the dominant landscape type. "Forests terraces villages rivers" are distributed from high mountains to river valleys. The villages are generally built in the ravine near the water source, the terraces are distributed in the relatively gentle area between the village and the mountainside, and the steep slope area from the mountainside to the top of the mountain is distributed with a large area of forest. The natural environment of "nine mountains and half water and half field" and the production mode that corresponds to it have formed a spatial pattern with forests as the main part, streams and rivers as the main part, arable land as the main part, villages and artificial mushroom forests as well as edible fungus cultivation as the spatial pattern of the spatial distribution.There are numerous cultural landscapes such as ancient villages, bridges, roads, and buildings within the heritage site, among which the corridor bridge architecture can be considered the most in the world.

Note: This table is based on the official website of the Food and Agriculture Organization of the United Nations, www.fao.org.

4. Study on the Heritage and Sustainable Development of Forest-Mushroom Symbiosis in Qingyuan, Zhejiang, China

4.1 Study on Inscription Strategies

The only two agricultural cultural heritage sites in China are listed in the The World Heritage List, the ancient tea forests of Mount Jingmai in Pu'er and the Hani terraces in Honghe are an important part of the farming civilization in southern China, reflecting the local people's wise use of the land and their cultural inheritance for generations, and are of great significance for the application for the inscription of the forest-mushroom symbiosis system in Qingyuan, Zhejiang Province. Pu'er Jingmai Mountain Ancient Tea Forest is the world's first case of world cultural heritage with the theme of "tea". Unlike the Honghe Hani Terraces, which can be referred to from other countries such as the Philippines, it needs to discover its "outstanding universal value" on its own.[9] In Zhejiang Province, the

ancient tea forest of Jingmai Mountain is the first World Heritage Site with the theme of "tea". [The Qingyuan Forest and Mushroom Co-cultivation System in Zhejiang Province is the only agricultural cultural heritage in the world that focuses on edible mushrooms, and it is in the same situation as the ancient tea forest of Jingmai Mountain in Pu'er, so it is possible to learn from the inscription process of the ancient tea forest of Jingmai Mountain in Pu'er in terms of the strategy of inscription.

The forest mushroom joint cultivation system in Qingyuan City, Zhejiang Province is located in a mountainous area, with a beautiful natural environment and abundant ecological resources, where tourists can enjoy tranquil forests, clear streams, diverse vegetation and abundant wildlife. Meanwhile, Qingyuan has a long history and deep cultural heritage, and visitors can experience unique local folk customs, traditional handicrafts, and rich folk legends and stories. With its beautiful environment and fresh air, Qingyuan is known as the "No.1 County of Ecological Environment in China", making it an ideal vacation spot. Visitors can relax here, away from the hustle and bustle, and feel the tranquility and beauty of nature. All in all, Qingyuan has rich and colorful tourism resources, which can provide tourists with a unique tourism experience. If the forest mushroom co cultivation system in Qingyuan City, Zhejiang Province is successfully applied for, it will attract more tourists to come for sightseeing and vacation. It will better promote the development of the local economy, culture, society, and environment.

4.2 Sustainable Development Studies

The Qingyuan Forest Mushroom Co-cultivation System in Zhejiang is not only the only agricultural cultural heritage in the world that focuses on edible mushrooms, but the heritage site is a typical high mountain area in China. Compared with the plains, the livelihoods of farmers in mountainous areas face more risks and uncertainties, and it is much more difficult to realize sustainable development, so they should explore a path of sustainable development that suits them. [10] Zhejiang Qingyuan forest and mushroom co-cultivation system is an eco-agricultural model that combines forestry and edible mushroom production, aiming to realize the sustainable use of forest resources and the sustainable development of the edible mushroom industry. Its sustainable development is a multifaceted and multilevel process involving ecological, economic, social and cultural fields. The following is about the sustainable development strategy of the Qingyuan forest mushroom co-cultivation system:

4.2.1 Resource recycling and environmental protection

There have been a number of alternative paths for realizing the "human-land relationship" in agricultural production in the traditional era. Among them, the forest-mushroom symbiosis system in Qingyuan, Zhejiang Province, adopts the "forest economy", which preserves the original state of the forest and utilizes the understory environment and forest species to maintain livelihoods. [11] In the forest-mushroom symbiosis system, the forest trees provide shade, moisturization and a suitable growing environment for edible mushrooms, while the waste materials (fungal chaff) of edible mushrooms can be used as organic fertilizers for the forest trees, improving soil fertility and forming a virtuous cycle. However, in this process, attention should be paid to maintaining ecological balance, avoiding excessive development, and ensuring that the symbiotic relationship between trees and edible fungi is not disrupted. And in the production process, strict compliance with environmental regulations reduces the emission of pollutants, and protects water sources and soil to ensure the health of the ecosystem.

4.2.2 Technological innovation and development economy

To accelerate the high-quality and green development of the edible mushroom industry, it is necessary to adhere to government organizational leadership, scientific planning, and clear development goals. By further improving the industrial system, improving the production environment, optimizing industrial models, increasing product technology content, stabilizing production scale, and consolidating the market position of edible mushrooms.[12]In order to protect the ecological environment, it is necessary to choose trees and edible mushroom varieties that are more suitable for the local environment, and continuously improve breeding techniques to strengthen the disease resistance of edible fungi and increase their yield. And reduce the use of pesticides and fertilizers. In addition, modern agricultural technologies can be used, such as intelligent management systems for greenhouses, to precisely control the temperature, humidity, light and other factors in the greenhouses.

In terms of market orientation, it is necessary to adjust the production plan according to the market demand, develop diversified edible mushroom products, and improve the added value of products and product competitiveness. At present, it has been involved in food, medicine and other aspects, giving birth to many derivative products. For example, mushroom sauce, ganoderma lucidum spore powder, ashwagandha capsule, and so on.

4.2.3 Cultural heritage and social benefits

Qingyuan, Zhejiang Province is the "largest distribution center of shiitake mushrooms in China" and has

the largest shiitake market in China - China Mushroom City. With the mushroom market as the center, the local government has built an internationally renowned, first-class, and province-leading "Qingyuan Mushroom Town". [The existence of "Qingyuan Mushroom Town" can better publicize the mushroom culture of Qingyuan. It shows the harmonious coexistence and common development of environmental protection, mushroom industry development, humanistic residence and mushroom culture inheritance. In order to better publicize the mushroom culture, digital media is indispensable, and more high-tech is needed to protect and disseminate it. At the same time, It is necessary to provide more professional training to relevant practitioners to improve their technical level and environmental awareness, in order to ensure the scientific management and sustainable development of heritage.

In addition, in order to be able to improve the social benefits, the governmental departments should introduce corresponding policies, provide financial and technical support, and encourage residents to participate in the construction and management of the heritage. Zhejiang Qingyuan forest mushroom coppice system has been the crystallization of local people's production and life for thousands of years, and its inheritance and development are of great significance for the protection of local culture and the improvement of community residents' quality of life.

5. Concluding remarks

This study introduces the uniqueness of the Zhejiang Qingyuan Forest Mushroom Symbiosis System and proposes the possibility of applying for the World Heritage Site. Zhejiang Qingyuan Forest Mushroom Symbiosis System is the only agricultural cultural heritage in the world that mainly focuses on edible mushrooms, and if it can be inscribed on the World Heritage List, it will be of great significance, and it can boost the economic, cultural and social development of the local area as well as neighboring areas. For the sustainable development research of the Zhejiang Qingyuan Forest Mushroom Symbiosis System, this study proposes three aspects of resource recycling and environmental protection, technological innovation and economic development, cultural heritage and social benefits for better sustainable development.

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