

Heritage as a development engine for people in nature: A case study of Wulingyuan Scenic and Historic Interest Area, China

Feng Han, Tongji University
Jing Li, East China University of Science and Technology

Corresponding author Feng Han (ORCID: <https://orcid.org/0000-0002-3389-5782>)

Department of Landscape Architecture, Tongji University, No. 1239, Siping Road, Shanghai, China

franhanf@qq.com

ABSTRACT

This paper explores strategies to promote sustainable tourism for people living in natural areas through a case study implemented in the renowned World Natural Heritage Wulingyuan Scenic and Historic Interest Area, a World Heritage Site inscribed for its natural values. The study is part of the UNESCO World Heritage and Sustainable Tourism Program's Chinese Pilot Studies. Various interventions, including understanding local values, revitalizing traditional handicrafts, and making culinary innovations, were implemented to enrich tourist experiences, empower local communities, and boost economic opportunities. Based on these interventions, this paper discusses community capacity building, stakeholder engagement, and conflict resolution as initiatives to enhance heritage conservation and promote sustainable tourism at the community level. On the level of the World Heritage property, a new management zone, the Traditional Eco-agricultural Heritage Zone, recognized the residency of the locals within the heritage site and fostered the harmonious co-existence of culture and nature. The successful integration of heritage conservation, community development, and sustainable tourism in Wulingyuan not only ensures the conservation of the site but also contributes to United Nations Sustainable Development Goals. This case study offers a model for sustainable development of Natural World Heritage Sites, emphasizing the importance of respecting and involving diverse local communities.

INTRODUCTION

Tourism plays a vital role as an appropriate platform for economic development. The potential of tourism to contribute directly or indirectly to all of the United Nations Sustainable Development Goals (UN SDGs), established in 2015, is widely recognized (UN 2015). As one of the world's largest industries, tourism has the potential to make a significant impact on global development by contributing to economic growth, environmental conservation, social inclusiveness, cultural preservation, and mutual understanding. Through sustainable practices, the tourism industry can support the achievement of key UN SDGs, such as promoting economic growth (SDG 8), conserving marine resources (SDG 14), reducing poverty and inequalities (SDGs 1 and 10), preserving cultural heritage (SDG 11), and fostering peace and security (SDG 16). By aligning with these goals, tourism can help create a more sustainable and equitable future for communities worldwide (UNESCO-WHC 2014a).

World Heritage is recognized for its contribution to UN SDGs as well. Regarding the UN's 2030 Agenda and the World Heritage Convention, World Heritage can contribute to SDGs by fostering economic growth, promoting social well-being, reducing disaster risks, and supporting peace-building efforts. World Heritage Sites (WHSs) may be an effective agent of sustainable development if the main goals and strategies of the WHS are clearly understood and prioritized in the local community, and leave room for and link to other development opportunities (Kaltenborn et al. 2013; UNESCO-WHC 2014b). By engaging local communities, ensuring sustainable use, and balancing conservation with development activities, WHSs can conserve their Outstanding Universal Value (OUV) while serving as assets for sustainable development.

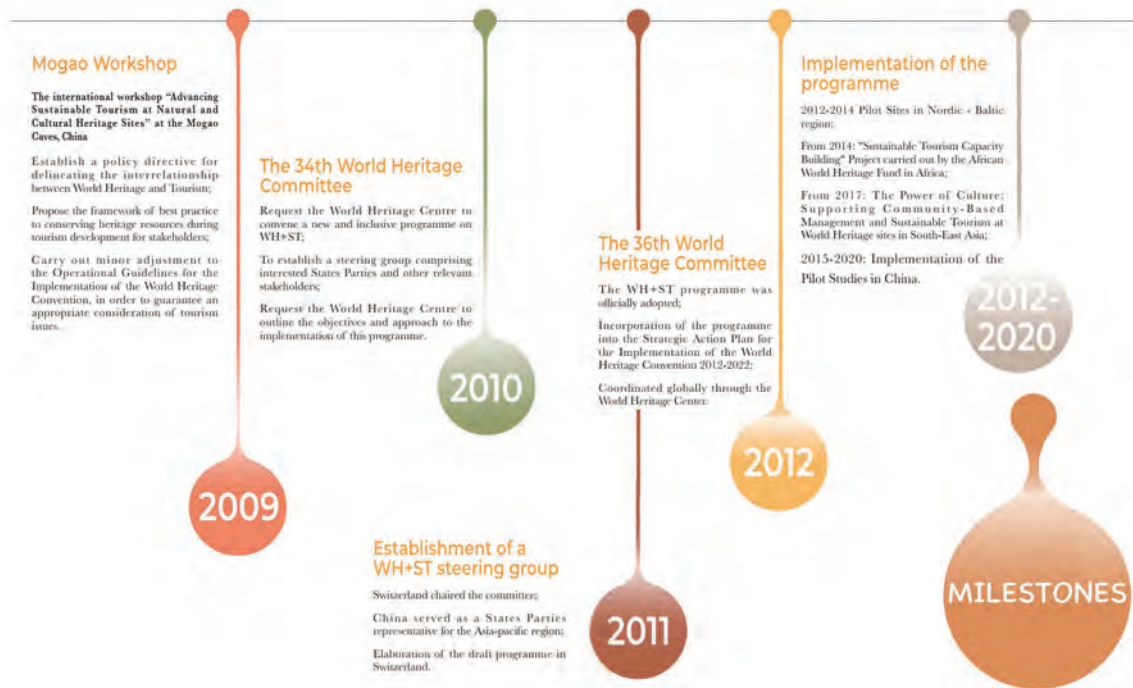


FIGURE 1. Historical events of UNESCO WH+ST Program (WHITRAP 2018).

However, many WHSs heavily depend on mass tourism as a primary source of economic sustenance, and local residents tend not to support it, as they seldom receive any substantial benefit from it and suffer from negative effects such as the inappropriate behavior of tourists (Wai and Hitchcock 2017). The launch of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) World Heritage and Sustainable Tourism (WH+ST) Program in 2012 marked a significant milestone in promoting sustainable tourism practices for WHSs. An action plan was adopted in 2013, with China playing an active role within the program (Figure 1). The first and corresponding author of this paper (FH), was active in commencing the program's initiatives on behalf of the state party. The UNESCO's World Heritage Institute of Training and Research for Asia and the Pacific Region (WHITRAP), a UNESCO Category 2 Center (capacity-building institutions that deal with specific aspects of World Heritage) in Shanghai, China, served as the launchpad for a Chinese Pilot Study supported by the UNESCO World Heritage Center to address the objectives of the WH+ST program (WHITRAP 2018; see <http://www.whitr-ap.org/index.php?classid=1489&newsid=2729&t=show>).

WHITRAP hosted a UNESCO WH+ST Training Program on 13–19 June 2016. A total of 33 WHS managers out of 56 World Heritage properties in China participated in this training. At the conclusion, agreements were signed with two of them, Wulingyuan Scenic and Historic Interest Area and the Hailongtun Fortress, one of three Cultural WHSs listed collectively under the name "Tusi Sites." Wulingyuan Scenic and Historic Interest Area was inscribed as a Natural WHS in 1992 under Criterion vii, which specifies that the site must contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance. These two aspects — superlative natural phenomena, and beauty to match — together constitute the OUV recognized by the World Heritage Convention.

Wulingyuan is indeed a spectacular area stretching over more than 26,000 ha in China's Hunan Province, dominated by more than 3,000 narrow sandstone pillars and peaks, many over 200m high. Between the peaks lie ravines and gorges with streams, pools and waterfalls, caves, and two large natural bridges (Figure 2). The region is also noted because it is home to numerous endangered plant and animal species. While Wulingyuan is a Natural WHS with outstanding natural value that is officially recognized as OUV, it also is located within a heavily populated agricultural region with more than 2000 years of human settlement history — and with that history comes multiple other values that must be accounted for, and which can be described as "historical and cultural values." Currently, there are 33 villages and more than 55,000 inhabitants, most of which are ethnic minorities such as Tujia, Bai and Miao. Wulingyuan is the most densely populated Natural WHS in China, with serious conflicts between conservation

FIGURE 2. Landscape of Wulingyuan, A natural heritage site embodying the coexistence of people and nature (Wulingyuan District Government, Chen Yang, Feng Han, 2018).



and development and prominent community issues that continue to be of concern to UNESCO and IUCN, the International Union for Conservation of Nature (Han 2020: 88–90). World Heritage General Assembly Decisions WHC-98/CONF.203/8 and 43 COM 7B.6 note that mass tourism at the site, relations with local community residents, and integration with regional and national planning systems have had a significant impact on Wulingyuan’s OUV. The IUCN World Heritage Outlook rated Wulingyuan in two successive rounds (2014 and 2017) as a property of “significant concern” (IUCN 2014: 20; IUCN 2017: 28). Despite the picturesque and harmonious depiction of the OUV in the site’s description, challenges arise in the realm of management, highlighting a discrepancy between the perceived beauty of the landscape and the practicalities of conservation efforts. The discords, especially those concerning local residents, form the root of the conflicts that have raised global concerns, and which demand a strategic approach toward inclusive conservation.

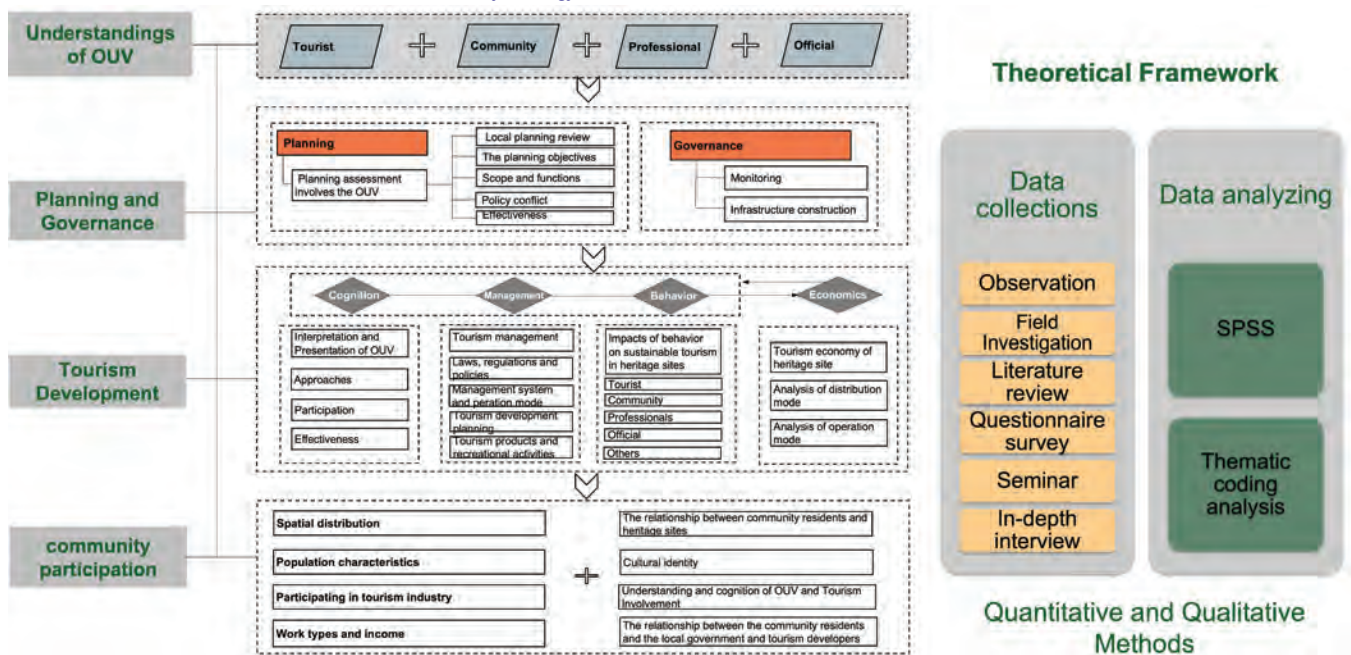
OBJECTIVE

The UNESCO WH+ST Chinese Pilot Study of Wulingyuan aimed at enhancing the understanding of OUV and improving site management through community-inclusive strategies. By focusing on these critical aims, the Chinese Pilot Study promised to cultivate community partnerships and engagement to ensure the sustainable conservation and development of the site. This objective also underscores the imperative of balancing tourism activities with heritage conservation to secure the long-term viability and integrity of these sites with multilevel values. And under this objective, an approach was used to connect culture and nature, especially by reconnecting residents of Wulingyuan with nature.

UNDERSTANDING THE PROBLEM

Following the general workflow of the WH+ST Program, we formulated the framework of the Wulingyuan study (Figure 3), which is based on four main themes: understandings of OUV and the multiple historical and cultural values of the site, planning and governance, tourism development, and community participation. The framework includes a comprehensive data collection design focused on observations, field investigations, literature reviews, questionnaire surveys, seminars, and in-depth interviews. The data were then analyzed with the SPSS Statistics 26.0 application and through thematic coding analysis. The on-site investigations and analyses yielded valuable insights, culminating in sustainable strategies under the four themes for engaging local communities in the development of the Natural WHS.

FIGURE 3. Theoretical framework of UNESCO WH+ST Chinese Pilot Study of Wulingyuan.

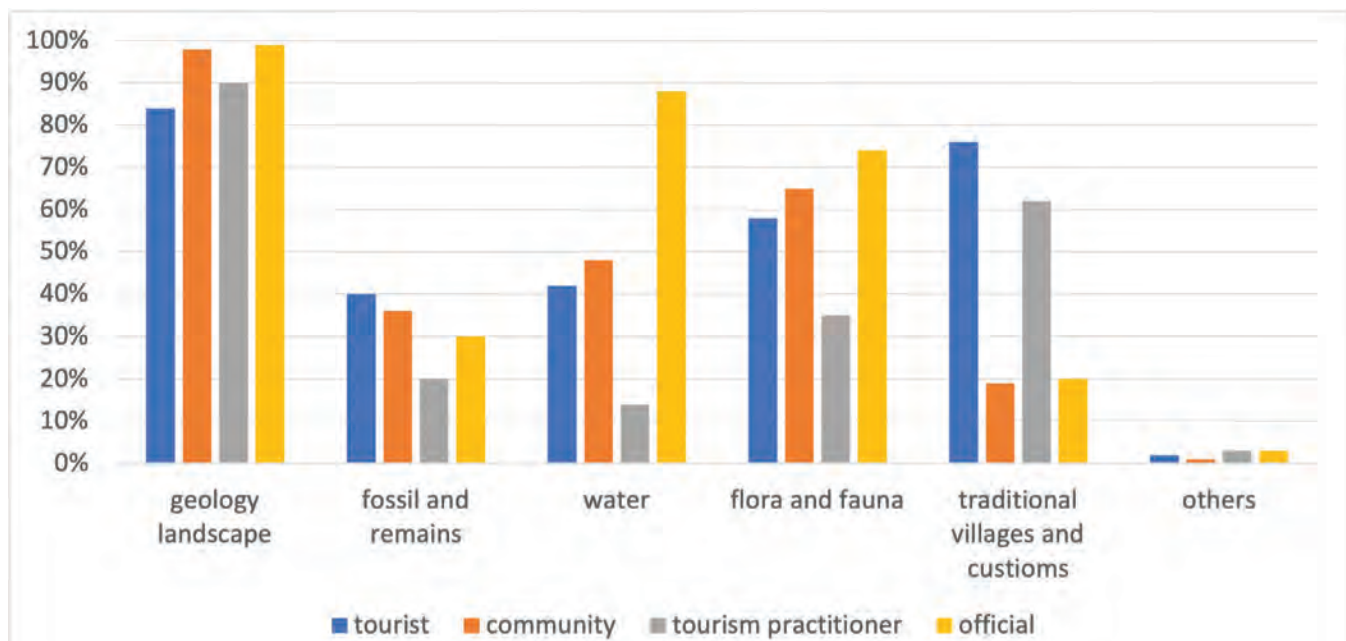
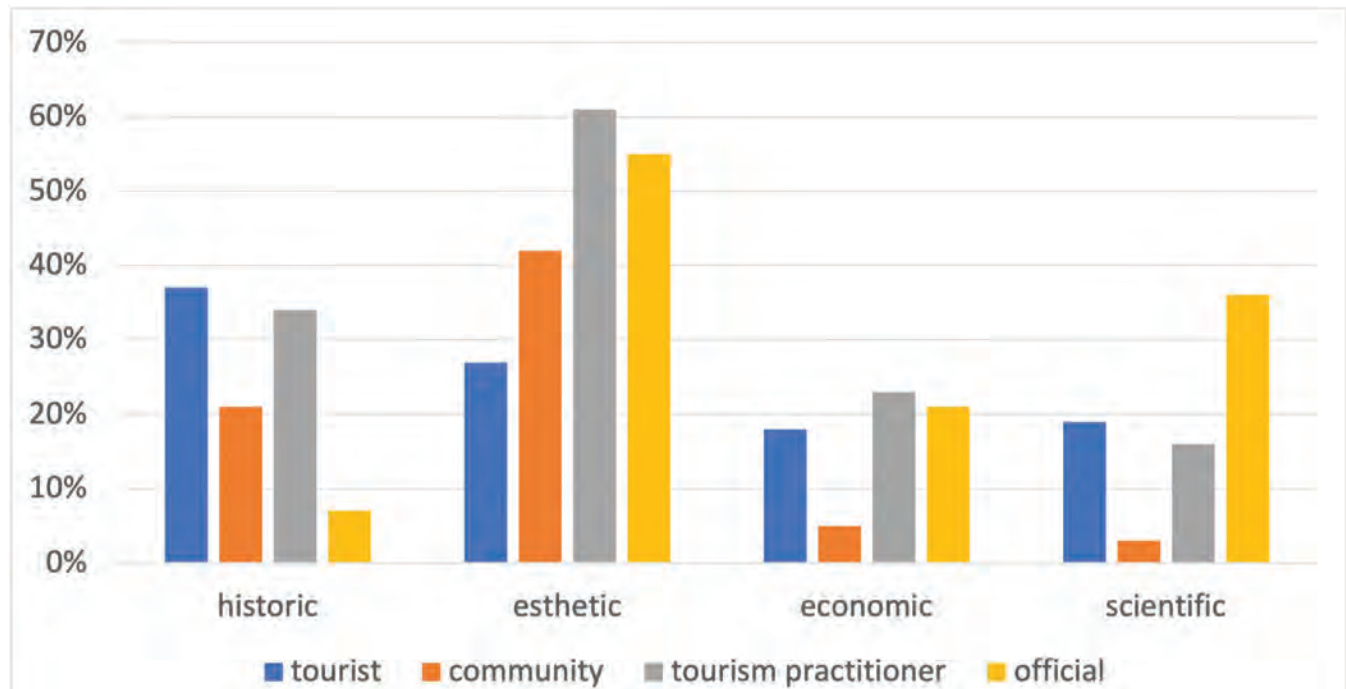


Problems of the understandings of OUV and multiple values of the WHS

For the questionnaire survey, this study selected four major stakeholder groups that are most closely related to the conservation and tourism development of Wulingyuan: tourists, community residents, tourism industry practitioners, and government officials. The research questions centered on their perceptions of the Wulingyuan World Heritage OUV and its attributes. The study collected 216 valid questionnaires from tourists, 170 from community residents, 103 from tourism practitioners, and 127 from officials, and then analyzed the questionnaires using SPSS Statistics 26.0. The results shows that all four stakeholder groups have obvious deficiencies in their knowledge of the integral heritage values of the property, which can be classified as *historic[al]*, *esthetic*, *economic*, and *scientific* (Figure 4), as well as some of the key attributes of that underlie these heritage values (Figure 5). The lack of recognition of heritage values and their attributes in turn leads to a lack of support for heritage conservation. The differences in the recognition of heritage

FIGURE 4 (top). Percentage of stakeholders who recognize Wulingyuan’s heritage values.

FIGURE 5 (bottom). Percentage of stakeholders who recognize specific attributes of Wulingyuan’s heritage values.



values and their attributes—for example some stakeholders, such as tourists, highly recognize the historic value and the specific attributes of traditional villages and customs, while others, such as local communities and officials, tend to overlook them—may result in different focuses of stakeholders on heritage conservation.

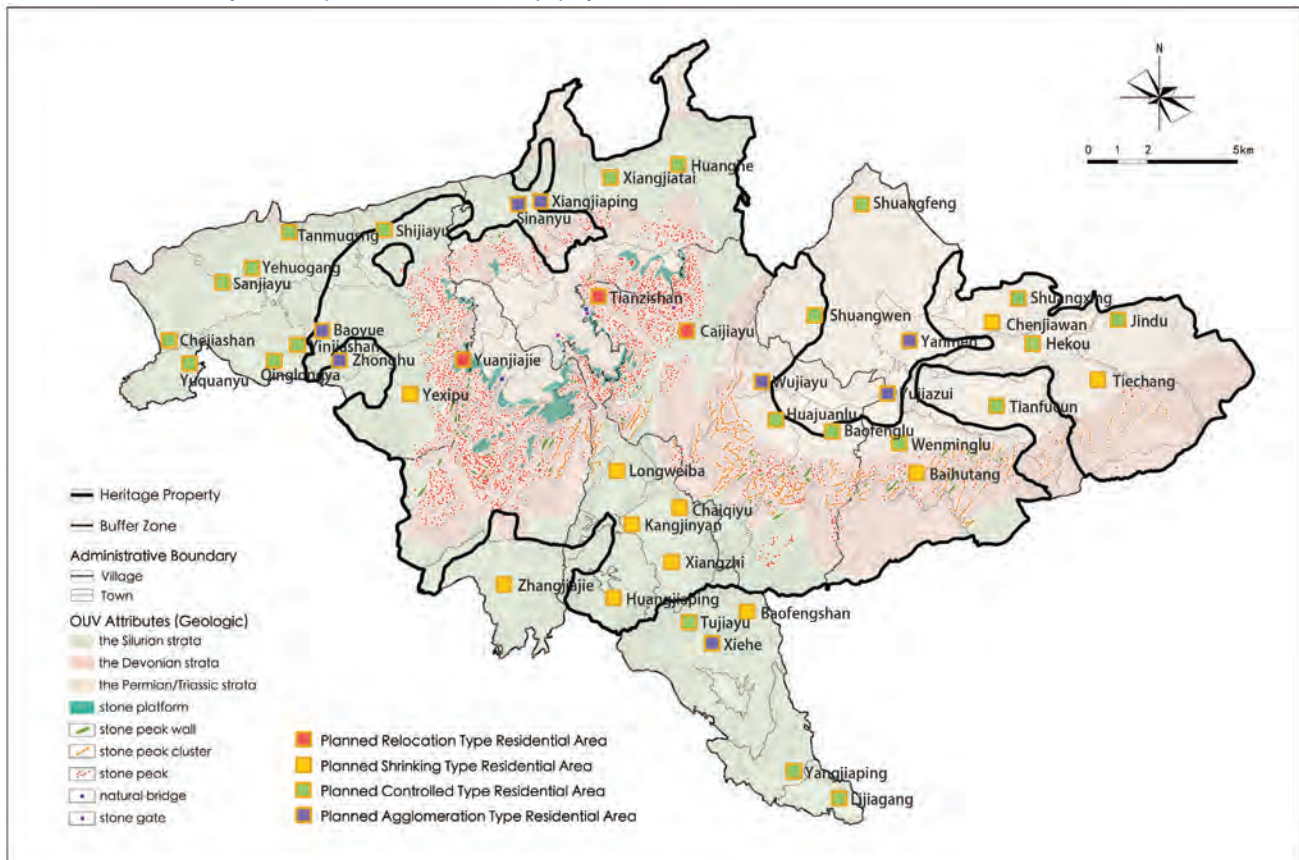
Problems about planning and governance

The insufficient knowledge of government officials about the historical and cultural values of Wulingyuan and the values embodied in the presence of its rural community are reflected in the conservation and management objectives of the site. These objectives are centered around the natural values embodied in the OUV only, while insufficient attention is paid to the linkage between them and the cultural values of the site. As a result, the officials are not sufficiently concerned with sustainable tourism and the socioeconomic development of local residents, and there is a gap between the planning and conservation objectives of the World Heritage OUV. The initial zoning of the WHS, which was completed in 2005 during the master planning phase, called for the relocation of residents from the core area of the heritage property for conservation purposes (Figure 6). However, the reality on the ground paints a starkly different picture. The reluctance of residents to leave the area has sparked complex and contentious conflicts, some of which have escalated into confrontations.

Problems related to tourism development

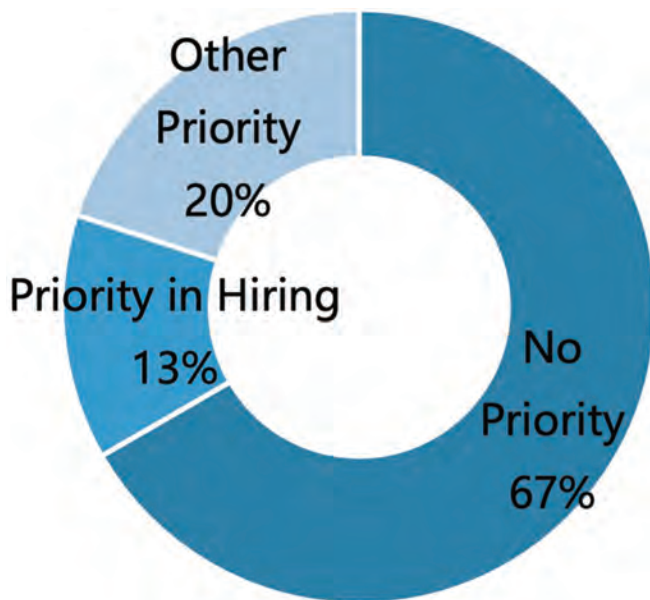
Tourism management of Wulingyuan has also seen conflicts. The misinterpretation of the local values for commercial purposes and problems related to the interpretation of the heritage values have affected tourists' perceptions of OUV and the quality of their heritage experience. In particular, large-scale tourist transportation facilities and the overconcentration of accommodation and catering facilities at the site pose serious challenges to heritage value and resource conservation, and the distribution of tourism income does not provide sufficient feedback to heritage conservation and local community development to support sustainable tourism at the site.

FIGURE 6. According to the formal master plan completed in 2005, conservation is centered on the OUV attributes only, especially the geologic attributes, while insufficient attention is given to the value of rural communities, with many settlements planned to be moved out of the property area.



Problems with community participation

Community participation in tourism at Wulingyuan is insufficient to meet the demands of rapid tourism development. There are multiple reasons for this low level of participation. First, the site has not yet formed economic interconnections, and tourism, which is the dominant industry, does not sufficiently connect with others, especially the agricultural economy. Second, the government has provided relatively little support for residents to participate in the operation and management of tourism, and has not yet given priority to local residents in terms of funding and training to participate in the industry (Figure 7). The planning issues mentioned earlier, however, are at the root of these problems. Due to the limitations of the master plan, there is a lack of comprehensive guidance for the development of the community tourism industry or community participation in tourism. The implementation of the plan caused a spatially unbalanced economic impact. The plan aggravated the urban–rural income gap, as well as differences in the economic situation of villages inside the WHS, which benefit most from tourism, and those outside, which benefit less. Additionally, skill and finance gaps have prevented the residents living outside the WHS from participating in tourism development. As our questionnaire to the community residents demonstrated, the majority of the residents who are engaged in the tourism industry do so in positions involving low-skill services or hard and unprofitable manual labor, which give them little of the benefits from the tourism industry (Figure 8).



Through the analysis of these interviews, questionnaires, and document data, the key problems of heritage conservation in Wulingyuan emerged. Local stakeholders have failed to understand the integrated heritage value of Wulingyuan, where nature and culture are intertwined, and at the same time they compete with each other for the benefits brought by the natural resources that are the focus of the WHS—while not fully understanding the concept of OUV on which the WHS is based. On this basis, the unique cultural landscape value of the rural communities has not been incorporated into the World Heritage value system for conservation, communication, and sustainable use.

FIGURE 7 (left). Percentage of residents receiving government priority to become engaged in tourism.

FIGURE 8 (below). Types of employment of residents engaged in tourism.

- Running a restaurant or hotel
- Setting up a stall for business
- Driving a car to pick up tourists
- Being a tour guide
- Maintaining order, sanitation and safety in scenic areas
- Working as an employee of ropeway, elevator and sightseeing tram companies
- Work as a porter



A STRATEGY TO RECONNECT PEOPLE AND PLACES

Here we present the outlines of a strategy we are carrying out to begin addressing the shortcomings just described, focusing on Longweiba (龙尾巴), which translates to Dragon Tail Village, a rural community within the WHS.

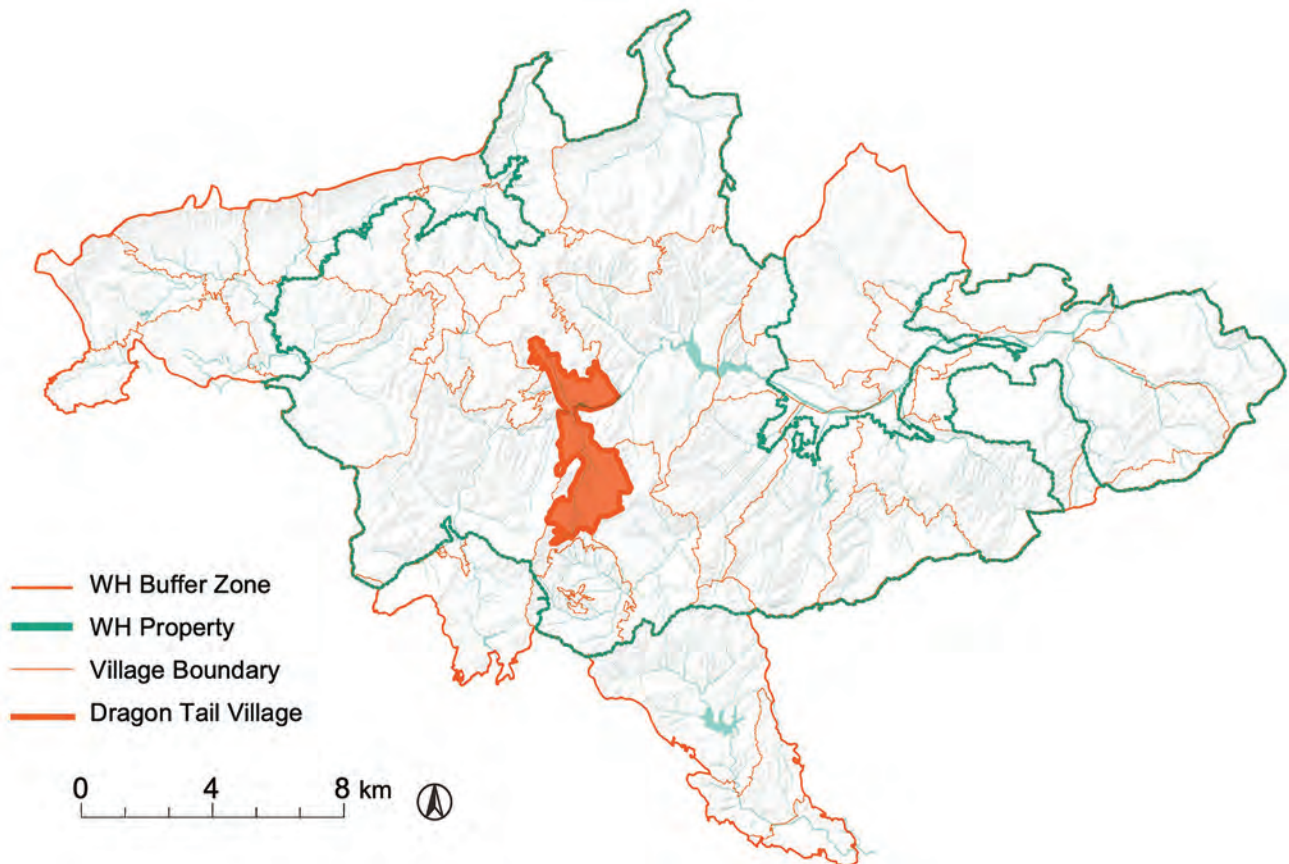
Community demonstration

Dragon Tail Village is located in the heart of World Heritage Wulingyuan (Figure 9). It is a typical rural landscape that not only exhibits the scenic and natural resource attributes of the World Heritage OUV, also highlights the value of integrating nature and culture. A development engine driven by the heritage value of rural landscape was designed to reconnect people and places. The engine is composed of three interventional initiatives.

First initiative: Understand the heritage value system

Initially appearing as a typical village within a protected area, after further investigation through multiple stakeholder interviews Dragon Tail Village was revealed as a landscape with profound connections between culture and nature. The traditional Tujia people exemplify a harmonious coexistence with their natural surroundings. The topography of the area offers inherent protection from harsh winter winds, with the central region, adjacent to a river, providing fertile land for agriculture. Local inhabitants engage in cultivation within this central area while also partaking in hunting and gathering activities in the surrounding hills (Figure 10). Deep appreciation for their surroundings is profound among the residents, as exemplified by the village's name, which is derived from a hill shaped like a dragon's tail—the dragon is a symbol of auspiciousness in Tujia culture representing fortune and strength. This hill holds sacred significance for the community, and is believed to safeguard against adversities in their lives. Moreover, the Tujia people express their worship for nature through various customs such as dancing, music, festivals, and artistic expressions (Figure 11). The

FIGURE 9. Location of Dragon Tail Village.



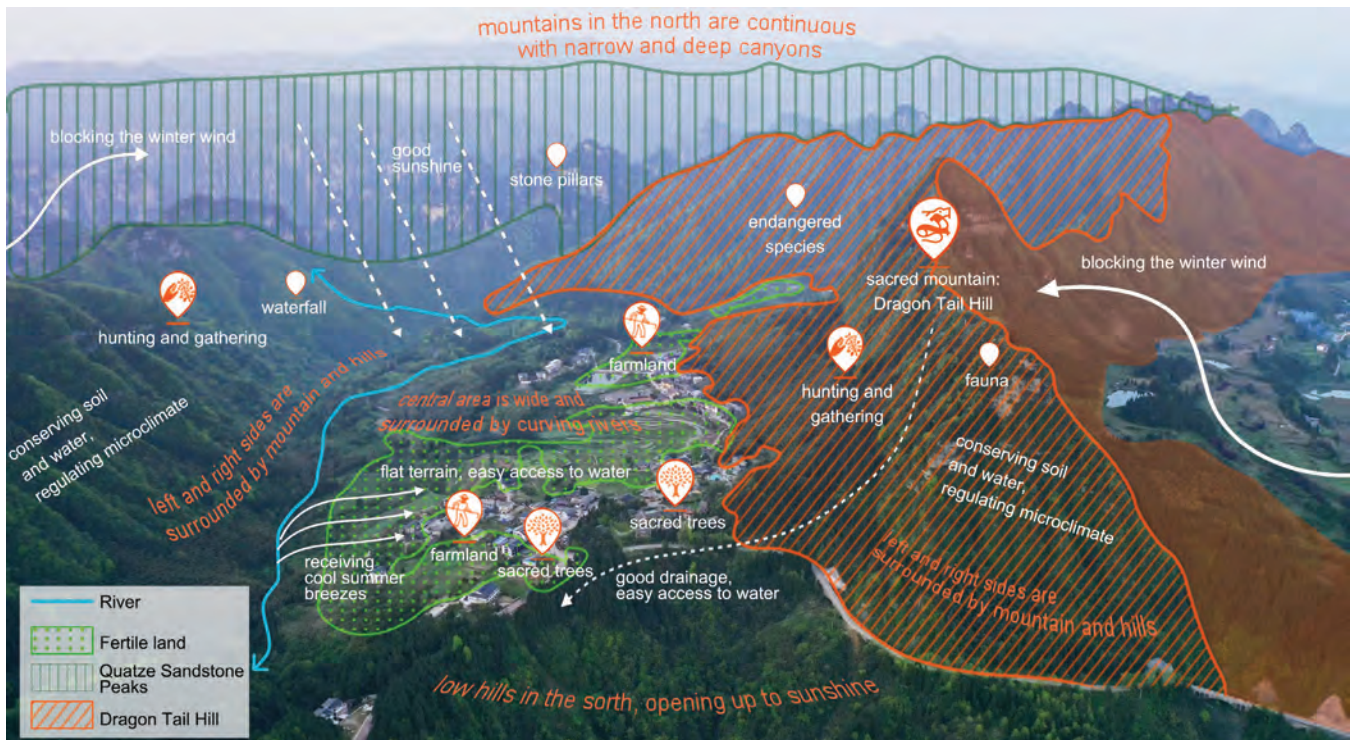


FIGURE 10 (top). Natural attributes of heritage value in Dragon Tail Village.

FIGURE 11 (bottom). Cultural attributes of heritage value in Dragon Tail Village.

exchange of knowledge with villagers not only fosters our learning but also empowers their integration of heritage into their daily lives. Based on these interviews, a consensus was reached that rural landscapes, including the people in these landscapes and their ways of living, should be conserved as foundations of the WHS's OUV.

Second initiative: Sustain rural production

The WH+ST pilot study enhanced the agricultural resilience of Dragon Tail Village by increasing the efficiency of land

use and the value attached to agriculture. The land where rice was originally grown has more functionality: rice is grown while ducks are raised in the paddy fields, and the ducks' excreta become fertilizer. At the same time, tourists can visit the farmland, experience farming culture, and buy agricultural products. The profitability of agricultural products improved and laborers who had emigrated returned home and settled. Consequently, abandoned farmland became productive and pleasant agricultural landscapes (Figure 12).

Third initiative: Revitalize Tujia culture

We have made dedicated efforts to promote Tujia traditional knowledge, crafts, and customs integrated into a unique tourism experience where visitors deeply interact with locals (Li et al. 2023). This includes immersive Tujia cultural experiences for tourists. Tourists can watch inheritors personally demonstrate the intangible heritage of branding iron painting, and can experience the craft of straw shoe weaving with the mentoring of the Indigenous people. Another remarkable traditional handicraft in Dragon Tail Village is the intricate art of Xilan Kapu brocade handiwork. This craft, characterized by vibrant colors and symbolic patterns, has been repurposed into various tourist souvenirs such as shawls, hair accessories such as hair bands, footwear, and pillows.

We also helped local people enhance their cuisine to make it more attractive to tourists. While authentic Tujia dishes are inherently delicious, tourists have shown limited interest in purchasing them. We assisted the local people to elevate these dishes from their basic forms into more visually appealing and innovative creations (Figure 13). Consequently, these enhanced Tujia dishes have gained greater popularity among tourists compared to their traditional counterparts. In addition, we designed a gourmet bistro run by locals (Figure 14). The bistro's design promotes communication with local people and enhances tourists' experience.

In all these projects, villagers engage in effective negotiation among stakeholders about the utilization of local culture for tourism purposes. Through these experiences, tourists get unforgettable memories of interactions with locals while visiting Dragon Tail Village, while villagers gain economic benefits and a sense of cultural pride. All this has helped to preserve and spread the endangered intangible cultural heritage of the Tujia ethnic group.

Zoning under a new master plan

In 2023 a new master plan for Wulingyuan Scenic and Historic Interest Area was created as part of the pilot study. In China, planning is a powerful way to coordinate resource protection and utilization opportunities and regulate the mode and intensity of human-land interactions through the core technique of zoning. The WH+ST pilot study investigated the heritage resources and development demands of the rural communities, and conducted detailed

FIGURE 12. Changes in the agricultural landscape of Dragon Tail Village as a result of the WH+ST Chinese Pilot Study.



FIGURE 13 (top). Examples of enhanced Tujia cuisine.
FIGURE 14 (bottom). The gourmet bistro.

Kudzu powder



Green Tea



Kudzu Powder Drink



Rock Tripe Wrap



Tujia Baba



Kudzu rolls

Fried rice with lard residue



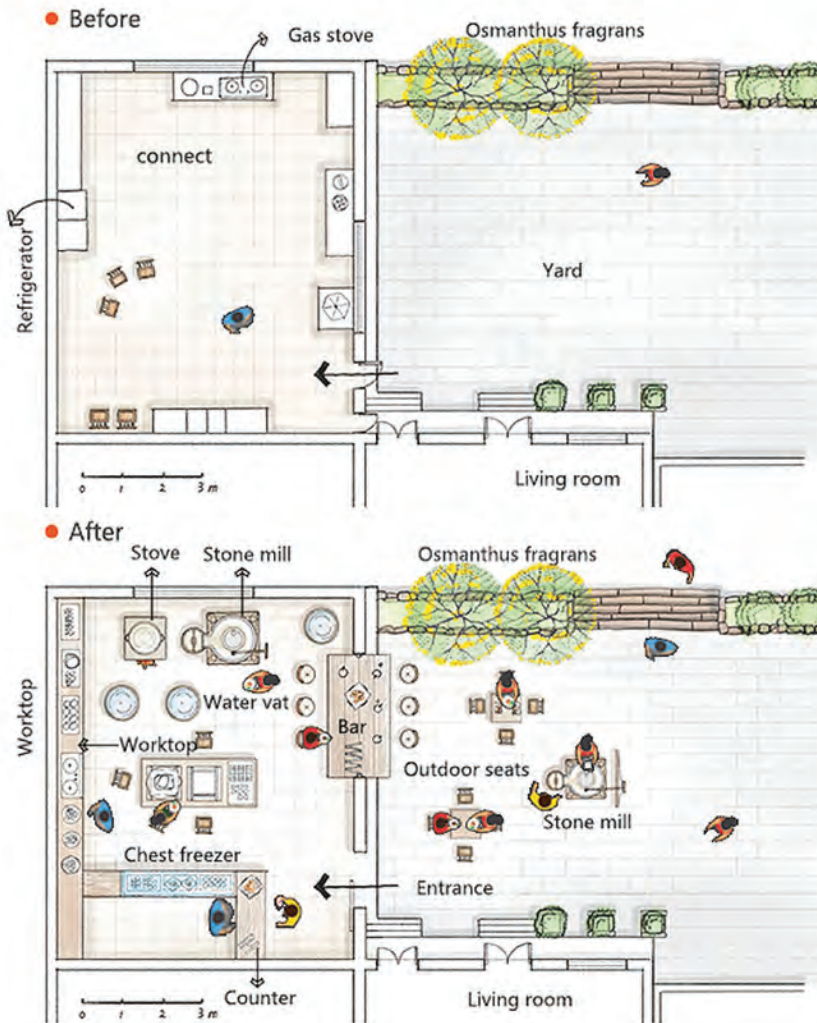
Kudzu drink with white/black sugar



Bamboo leaf rice cake



Kudzu grass jelly



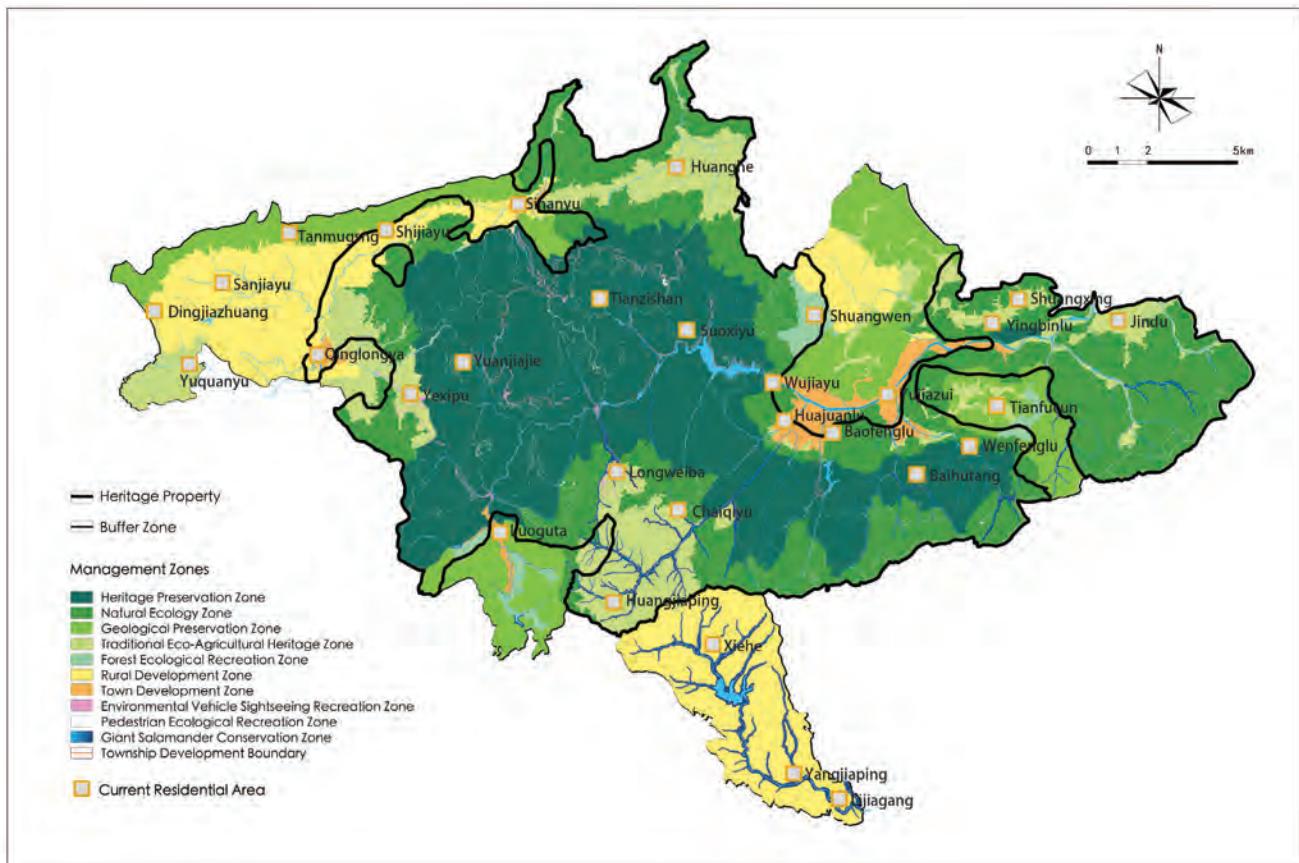
surveys and rational evaluations of the heritage value of the rural landscape. Through innovative zoning, the pilot study ensures the authenticity and integrity of rural landscape heritage conservation, while regulating the sustainable use of resources by rural residents.

The establishment of a novel zoning designation known as the Traditional Eco-Agricultural Heritage Zone (TE-AHZ) allows residents to legally establish a zone where they remain living within the WHS (Figure 15). The guidelines for the TE-AHZ orient community-based conservation of natural resources and sustainable tourism to increase employment opportunities for residents. This is done in a variety of ways so that the community can benefit to a greater extent from the economic benefits of heritage tourism, and to achieve poverty alleviation and rural revitalization. In TE-AHZ settlements, the entry of outside businesses is strictly controlled to avoid competition with local villagers, in order to achieve the coordination of resource protection, economic development, and Indigenous rights. When villagers want to use their own houses for rural lodging, any changes need to be carefully approved by strictly controlling the size of the residence, with the additional requirement that the traditional agricultural landscape be maintained surrounding the house. The TE-AHZ is designed to show the authentic features of Wulingyuan’s rural cultural landscape. Villages that had to be relocated under the previous master plan are recognized in the TE-AHZ as having the right to stay and develop within the World Heritage Property. Through innovative management zoning, the pilot study promotes the sustainable evolution of rural landscapes based on traditional knowledge and endows communities with rights to sustainable resources use.

OUTCOME

The outcome of this study suggests that the sustainable development of Natural World Heritage Sites that include rural communities requires a program similar to that of the UNESCO WH+ST Chinese Pilot Study to act as a bridge reconnecting culture and nature. Many actions of WH+ST need to be ensured through planning for their smooth

FIGURE 15. Management zones of Wulingyuan under the new master plan completed in 2023.



implementation. Planning as a mechanism integrates communities into specific zones and providing them with special management guidelines, guiding communities to sustainably develop based on their traditional knowledge and utilizing the value of their heritage. Building upon this, communities are guided towards sustainable use of natural and cultural resources, ensuring the preservation of the complete value system of heritage sites.

The conservation, interpretation, and experience of heritage value not only act as incentives for the economic and cultural prosperity, but also bolster the role of local residents in ecological conservation. Community-level initiatives of the UNESCO WH+ST Program have fostered the restoration of abandoned farmland and the revival of sustainable agriculture. Traditional agriculture, craftsmanship, and customs are infused with new functions and integrated into tourism programs. Such initiatives effectively conserve local cultural diversity and include Indigenous culture in the sustainable development of the WHS.

The efforts of the UNESCO WH+ST Chinese Pilot Study of Wulingyuan have yielded remarkable achievements. The IUCN World Heritage Outlook 3 conservation status report announced that Wulingyuan Scenic and Historic Interest Area has been upgraded from being of “significant concern” to “good with some concerns” (IUCN 2020). The World Heritage Center directly attributes this improvement in conservation status to the collaborative work of WHITRAP, the local community of Wulingyuan, and WH+ST pilot study.

CONCLUSION

The case of UNESCO WH+ST Chinese Pilot Study of Wulingyuan demonstrates that the cultural and natural values of WHSs provide solid support for sustainable development of Indigenous rural landscapes. Indigenous communities are prime contributors to the heritage value of these rural landscapes, and sustainable agriculture is, in turn, the fundamental ground for the development of Indigenous communities. Intangible cultural heritage, as a source of vitality and identity for local people, drives sustainable development in its cultural and social dimensions. Heritage conservation, interpretation, experience, and communication can act as a source of motivation for community empowerment and development. Heritage, as a permanent human property, can be a reliable, irreplaceable resource for sustainable development. Natural World Heritage Sites are properties whose OUVs are shared by all humanity. For those sites with Indigenous communities, management should emphasize the residency within the heritage site as a basic right of Indigenous peoples and support it to foster the harmonious coexistence of culture and nature.

ACKNOWLEDGMENTS

We would like to thank Brenda Barrett for the opportunity to submit this article and for her detailed review as a constructive contribution to it. We appreciate the ICOMOS GA2023 Scientific Symposium for giving us the opportunity to present the findings of this paper. The Wulingyuan World Natural Heritage Conservation Research and Communication Center is thanked for its assistance in the research and interventions, and the UNESCO World Heritage Training and Research Institute for the Asia and the Pacific Region [WHST-0014] and the Ministry of Science and Technology of the People’s Republic of China, National Key R&D Program [2016YFC0503308] are acknowledged for their funding. We sincerely acknowledge the villagers of Dragon Tail Village for their acceptance of and friendliness to our interventions, and we are also grateful to all levels of government in Wulingyuan for their support of our survey and practice.

REFERENCES

Han, Feng. 2020. *World Heritage Wulingyuan Scenic and Historic Area*. Shanghai: Tongji University Press.

IUCN [International Union for Conservation of Nature]. 2014. *IUCN World Heritage Outlook 2014*. Gland, Switzerland: IUCN.

IUCN. 2017. *IUCN World Heritage Outlook 2*. Gland, Switzerland: IUCN.

IUCN. 2020. *IUCN World Heritage Outlook 3*. Gland, Switzerland: IUCN.

Kaltenborn, Bjørn P, Jørn Thomassen, Line C. Wold, John D.C. Linnell, and Birgitte Skar. 2013. World Heritage status as a foundation for building local futures? A case study from Vega in Central Norway. *Journal of Sustainable Tourism* 21(1): 99–116. <https://doi.org/10.1080/09669582.2012.680465>

Li, Jing, Chen Yang, Yichen Zhu, and Feng Han. 2023. How does the World Heritage Sustainable Tourism Programme guide the evolution of rural landscapes? *Landscape Research* 48(4): 517–530. <https://doi.org/10.1080/01426397.2023.2170995>.

UN [United Nations]. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. New York: UN.

UNESCO-WHC [United Nations Educational, Scientific, and Cultural Organization, World Heritage Center]. 2014a. UNESCO World Heritage sustainable tourism toolkit: Guide 2: Developing a strategy for progressive change. In *UNESCO World Heritage Sustainable Tourism Toolkit*. UNESCO-WHC (ed.). Paris: UNESCO-WHC.

UNESCO-WHC. 2014b. UNESCO World Heritage sustainable tourism toolkit: Guide 4: Engaging local communities and businesses. In *UNESCO World Heritage Sustainable Tourism Toolkit*. UNESCO-WHC (ed.). Paris: UNESCO-WHC.

Wai, Ivan Ka Lai, and Michael Hitchcock. 2017. Local reactions to mass tourism and community tourism development in Macau. *Journal of Sustainable Tourism* 25(4): 451–470. <https://doi.org/10.1080/09669582.2016.1221413>

WHITRAP [World Heritage Institute of Training and Research for Asia and the Pacific Region]. 2018. World Heritage and Sustainable Tourism Programme Chinese Pilot Studies brochure. Shanghai: WHITRAP. <http://www.whitr-ap.org/themes/69/userfiles/download/2018/5/31/oyvizcdlwzdkqpw.pdf>