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Multi-agency management of a World Heritage Site: Wulingyuan Scenic and Historic Interest Area, China

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Involving a variety of stakeholders, heritage tourism management requires a collaborative multi-actor approach. Due to the current grid management system, shared management among multiple agencies is not rare in heritage sites in China; however limited research has addressed this situation. A multi-agency management model is thus proposed to highlight the roles of a coordination agency and a collaboration mechanism. Taking Wulingyuan Scenic and Historic Interest Area as an example, this paper compares the management status and assesses management collaboration between its two main management bodies. Semi-structured interviews with management staff are used as the primary research method. It is revealed that shared management has resulted in the inefficient use of human and financial resources, and inconsistency in the application of management measures and standards due to the lack of an efficient coordination agency and collaboration mechanism. Suggestions are made to facilitate collaboration and enhance management efficiency in this multi-agency management context.

Keywords: : multi-agency management; collaboration; World Heritage; Wulingyuan; China

Introduction

Heritage tourism management commonly involves a variety of stakeholders, impacts multiple groups who often have different interests and priorities, and requires a collaborative multi-actor perspective. This is particularly the case in China where the current grid management structure involves numerous governmental authorities in both hierarchical and parallel positions. Previous research on partnerships or collaborative management in a tourism context has usually focused on collaboration between stakeholders of a different nature and from different sectors, commonly managed by one management agency. The emphasis of this work is on how the management agency can best involve multiple stakeholders in decision-making. In contrast, few researchers have addressed situations where management is shared among multiple management agencies at a similar level in the governmental hierarchy. Previous research indicates that the presence of an effective coordinating agency and

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a set of collaboration mechanisms are necessary if sound collaborative management among multiple agencies is to occur (Bramwell & Sharman, 1999).

Listed by UNESCO as a World Heritage Site in 1992, Wulingyuan Scenic and Historic Interest Area (hereafter called WSHIA) is a heritage site with intensive tourism uses. As a result of historical reasons, two bodies oversee management of the site. They are Wulingyuan District Government (hereafter called WDG) and Zhangjiajie National Forest Park Administrative Office (hereafter called ZNFPAO). Previous research at Wulingyuan has indicated the management complexity that results from the shared management but scant attention has been paid to this aspect of management or to explore the implications of shared management in detail. Accordingly, WSHIA is explored as an example of multi-agency management through analyses of its current management structure, exploration of the current management status and assessment of the nature of collaboration between the two main management bodies.

Semi-structured interviews were undertaken with management staff at both management bodies as the primary source of insights, supplemented by on-site observations and collection of secondary data. Due to the lack of efficient coordination and collaboration mechanisms, the shared management of WSHIA has resulted in tensions between the two management bodies, the inefficient use of human and financial resources and inconsistency in the application of management measures and standards. Suggestions are made regarding means to facilitate collaboration and enhance management efficiency in this multi-agency management context.

World Heritage management in China

With a vast land area, long history and rich culture, heritage resources in China are diverse, drawing upon and often celebrating the connections between culture and natural resources (Fang, 2004). China now has 50 World Heritage Sites, including 35 cultural, 11 natural and 4 mixed heritage sites (UWHC, 2016). World Heritage Sites in China constitute valuable resources for tourism and serve a large domestic and international population (Li, Wu, & Cai, 2008; Zhang, Fyall, & Zheng, 2015). Chinese people prefer sites that are officially recognized (Nyiri, 2006); such as World Heritage Sites, national 5A scenic sites, places celebrated in famous artistic and literary works or visited previously by famous people. Therefore, the stimulus of World Heritage designation to tourism development is particularly evident in China (Wu, Li, & Huang, 2002; Zhang et al., 2015). However, with a relatively short modern history of tourism and a great demand for further development, tourism at World Heritage Sites in China creates many challenges. Therefore, sound heritage management that can mediate between the desire for preservation and the pressures of burgeoning tourism is required (Zhang et al., 2015).

As elsewhere, World Heritage management in China involves and has implications for a variety of stakeholders, including UNESCO, the international heritage community, multiple government departments from national to local levels, tourism businesses, local communities and domestic and international visitors (Su & Wall, 2014; Su, Wall, & Xu, 2016; Zhang et al., 2015). Overall policy is set and plans are approved on designation by UNESCO, but day-to-day management decisions are usually taken at the local level. Government at all levels still plays major roles in the management of World Heritage Site in China, which is legislatively confirmed by laws and regulations (Feng, 2012; Zhang et al., 2015).

As shown in [Figure 1](#), China has implemented a grid management system for World Heritage Sites, meaning that multiple agencies are involved horizontally and these are

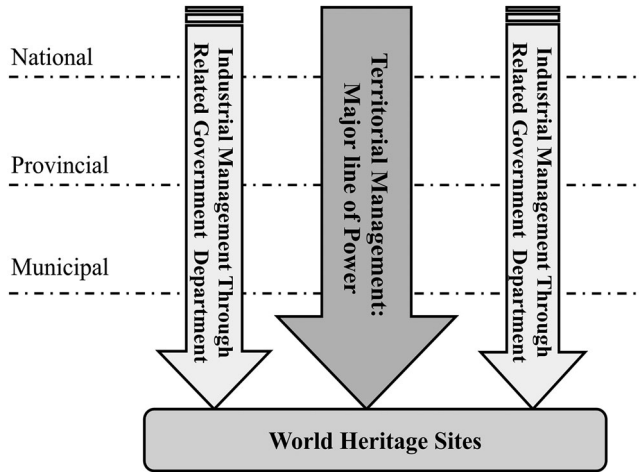


Figure 1. The grid management structure of World Heritage Site in China.

replicated vertically at national, provincial and municipal levels (Luo, 2007; Su & Wall, 2012; Yao, 2009). Most World Heritage Sites in China are subject to territorial management, except for a few owned and managed directly by state ministries such as the Forbidden City (Su & Wall, 2012; Yao, 2009). The local government where the site is located, usually at the municipal level, takes substantial management responsibilities, such as allocating financial and human resources, project planning and implementation (Yao, 2009). Moreover, as the original management lines are usually maintained after the site is listed, the Ministry of Cultural Heritage is involved for cultural heritage sites, the Ministry of Construction for scenic sites, the Forestry Administration or the Ministry of Agriculture for nature reserves (Luo, 2007; Su & Wall, 2012; Yao, 2009) and so on. Furthermore, each heritage site possesses different natural, cultural and social situations, which affect the composition of the management structure, including which departments are involved and how they are positioned and prioritized. As a result, governmental departments such as heritage preservation, construction, tourism, forestry, water resources, environmental protection and ethnic affairs may be involved (Su & Wall, 2012; Yao, 2009). Together they constitute the heritage management grid with both hierarchical and horizontal lines of management. Overlapping roles and responsibilities commonly occur between government departments, both vertically and horizontally (Dredge, 2006; Nyiri, 2006). Therefore, the implementation of the management system requires extensive collaboration between different agencies at different levels, leading to management difficulties (Wang, 2002).

The current management structure involving multiple departments at multiple levels is a result of the failure to establish a centralized management body at the state level (Luo, 2007; Ma, 2010; Xu, 2004; Yao, 2009). Therefore, there have been many calls for the creation of a government department in China to centralize World Heritage Site policy-making and management (Luo, 2007; Ma, 2010; Xu, 2004; Yao, 2009). In this context, considerable research has been undertaken in recent years to identify and analyse major management issues in World Heritage Sites in China, including policy-making, organizational structure, the management system and financial management, development models and conflicts (Ma, 2010; Su & Wall, 2011; Yao, 2009; Zhang et al., 2015). Nevertheless, there has been little research that focuses on micro-level management that examines the type, responsibility,

management opportunities and challenges of the site management agency, its position in the management system and relationships with other management bodies (Luo, 2004). Moreover, where such research exists, it has been restricted to the analysis of World Heritage Sites managed by a single management agency, such as Taishan (Guo, 1999), Huangshan (Xu, 2006), Wuyishan (Liu, 2012), the historical villages of Xidi and Hongcun (Liang & Wang, 2005) and the Great Wall Sites in Beijing (Su & Wall, 2012, 2014). Minimal attention has been given to the roles of other agencies with which they should interact. Thus, there is a need to further examine the complexities of World Heritage Site management in China at the local level.

Collaborative management involving multiple agencies

Management of World Heritage Sites often involves a variety of stakeholders and impacts multiple groups at different scales. These stakeholders often have different values, goals and objectives (Jamal & Stronza, 2009; Medeiros de Araujo & Bramwell, 2002; Wall & Mathieson, 2006) and differ in their influence over decision-making (Jamal & Stronza 2009; Mc Kercher, Ho, & du Cros, 2005; Su & Wall, 2012). Although most protected areas, including World Heritage Sites, are under only one property regime as one of state property, communal property or private property (Borrini-Feyerabend, 1996), shared rights of ownership and rights of use are not rare. In fact, the management status varies according to the social, economic and political conditions in which they are embedded. Moreover, in some cases, disputes exist over the control of the protected territory due to economical, political or historical reasons (Borrini-Feyerabend, 1996). Particularly in China, although the state nominally owns all of the territory, some sites have mixed ownership status with ownership and management rights shared between different parties, leading to management complexity and conflicting policies (Su, Wall, & Ma, 2014).

Therefore, as Hall and McArthur (1998) argued, many heritage management challenges are compounded by the need for collaboration between stakeholders. Conflicts among stakeholders have been identified as being among the predominant heritage and tourism conflicts at World Heritage Sites (Zhang et al., 2015). Such a situation often leads to redundancy in the involvement of management departments, lack of an authoritative management department, lack of collaboration among different stakeholders, conflicts due to competing interests, inconsistency in management and operation, a prolonged process in decision-making, inefficiency in information dissemination and the utilization of human and financial resources, and inconsistency in visitor experience provision and many more (Yuan, 2006; Zhang, 2006; Zhang et al., 2015). Therefore, the fostering of collaborative multi-stakeholder approaches is necessary (Graci, 2013).

Collaborative management can be defined as partnerships through which stakeholders share the management functions, rights and responsibilities for a territory (Borrini-Feyerabend, 1996). It is an inter-organizational effort to achieve sound management that extends beyond the abilities of a single organization. Typically, the exchange of ideas and expertise, and the pooling of human and financial resources are involved (Selin & Chavez, 1995; Vernon, Essex, Pinder, & Curry, 2005). Usually, the collaborating parties agree to follow shared rules to seek mutually determined solutions but retain their independence in decision-making (Gray, 1989).

The literature on collaboration in tourism has evolved over a 20-year time span. Many attempts have been made to address issues of collaborative management involving multiple stakeholders in the tourism planning, development and management contexts (Jamal & Stronza, 2009; Nurse-Bray & Rist, 2009; Plummer, Kulczykcki, & Stacey, 2006; Selin,

2009). Many potential benefits have been identified, including avoiding potential costs of resolving conflicts, enhancing management efficiency and promoting equity (Bramwell & Sharman, 1999), ultimately enhancing visitor experiences and protection of resources (Selin & Beason, 1991). Although emphases vary, the key elements for successful multi-stakeholder partnership or collaboration can be summarized as interdependent stakeholders, solutions emerging by dealing constructively with differences, joint ownership of decisions, collective responsibility among stakeholders for future directions, and recognition that partnerships evolve through emergent and dynamic processes that respond to forces that are both internal and external to the partnership (Graci, 2013; Gray, 1989; Selin, 2009). Collaborative management is considered to be essential to achieve sustainability because it involves the bringing together of different stakeholders to establish common goals and joint actions (Graci, 2013).

Successful collaborative management is unlikely to occur by chance and a coordination agent or a facilitator is usually needed to initiate dialogue and sustain effective collaboration (Bramwell & Sharman, 1999; Selin & Beason, 1991). Figure 2 is a simple illustration of a multi-agency management model derived from the above discussion.

A coordination agent acts as the bridge between management agencies when disputes arise, and it is usually at a higher management level than the agencies that disagree. It is often drawn from a higher level of government (Su et al., 2014). The extent to which the facilitator exerts control over decision-making affects the effectiveness of collaborative management (Bramwell & Sharman, 1999). In addition to a coordinating agent, a mechanism to foster and regulate collaborative management is required. It should have a clear statement of management responsibilities, including the geographical limits of jurisdiction (Su et al., 2014), the intended scope of collaboration, management and operation standards (Bramwell & Sharman, 1999), as well as a monitoring scheme and a conflict resolve system.

Moreover, due to the importance of connectivity and integration in management, joint planning and monitoring activities are often required to address diverse interests and priorities (Fitzsimons & Wescott, 2008a, 2008b). Information dissemination and exchange among management agencies should be specified and regulated, including the frequency, format and content of communication, to require ongoing interaction among management

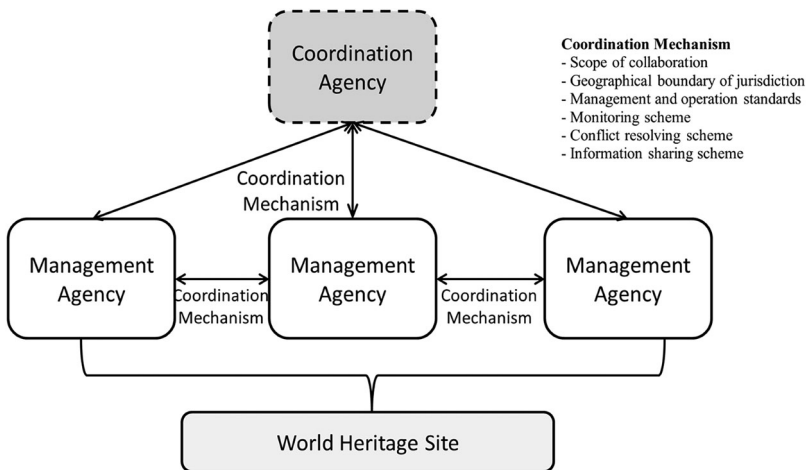


Figure 2. A multi-agency management model of World Heritage Site.

agencies (Bramwell & Sharman, 1999). Such arrangements should be supported by governments and implemented by the coordination agent (Su et al., 2014).

However, the micro-level dynamics that regulate collaborations in tourism at World Heritage Sites is largely neglected. It calls for further empirical investigations examining different actors and their associations, interactions, strategies and tactics in the process of planning and management (Arnaboldi & Spiller, 2011). Moreover, most research on collaborative management in tourism has focused upon relationships between stakeholders that are very different, such as between public and private agencies, governments and non-government organizations or a management agency and a community (Nursesey-Bray & Rist, 2009; Selin, 2009). Little research has addressed shared management among multiple management agencies at a similar level in the decision-making hierarchy as frequently occurs in China.

Due to the growing competition for World Heritage designation as well as the existence of heritage resources that cross jurisdictional boundaries, multi-agency management systems are likely to proliferate so that, according to Liang and Wang (2011), research on this topic is necessary and important.

WSHIA is a developed and intensively visited World Heritage Site. Due to historical reasons, it has two parallel management bodies and this situation has resulted in inconsistency in management and operation, inefficient use of resources and difficulties in addressing management problems (Zhang, 2006). Accordingly, taking WSHIA as an example, this research analyses its management structure and assesses the collaborative relationships between the two major management bodies using a multi-agency management model. In this way, management challenges and opportunities of multi-agency management of World Heritage Sites in China will be elucidated.

Research site: WSHIA

WSHIA is an area of over 26,400 hectares located in the administrative area of Zhangjiajie City in the northwest of Hunan Province, China (Figure 3). The site is noted for more than 3000 quartzite sandstone pillars and peaks, many over 200 meters high, along with 40 caves with impressive calcite deposits, 2 huge natural stone bridges and many ravines and gorges with attractive streams, waterfalls and pools (UNESCO World Heritage List, 2016). The reserve is home to a large number of rare and endangered plant and animal species (Wang, Xia, & Chen, 2008). In addition, rich cultural and historical resources are associated with the ethnic groups, such as Tujia, Bai and Miao, who have resided in the area for thousands of years (Zhong, Deng, & Xiang, 2008) and comprise about 95% of the population of 59,000 (WDG website, 2015).

The Wulingyuan area was initially known as Zhangjiajie Forest Farm (Zhang, Xu, Su, & Ryan, 2009). In 1982 it was designated as Zhangjiajie National Forest Park (hereafter called ZNFP) by the State Council of China due to its special geological and environmental assets (Wang et al., 2008; Zhang, 2006; Zhong et al., 2008; Zhang et al., 2009). In 1988, WSHIA was established by the State Council, combining ZNFP with Tianzishan Scenic Area, Suoxiyu Natural Reserve Area and Yangjiajie Scenic Zone (Zhang et al., 2009). In 1992, the core zone was inscribed as a natural World Heritage Site by UNESCO. Subsequently, Wulingyuan was classified as a National Geological Park by the Ministry of Land and Resources in 2000, a World Geological Park by UNESCO in 2004 and one of the first batch of 5A scenic spots by the National Tourism Bureau in 2007 (Zhong et al., 2008; Zhang et al., 2009). Furthermore, these designations possess slightly different boundaries.

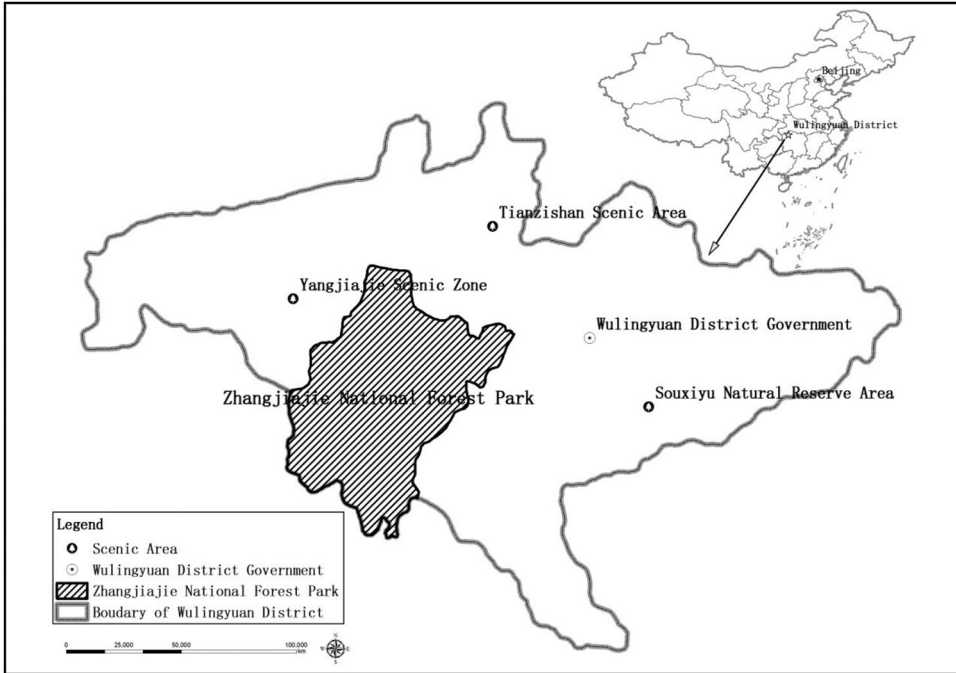


Figure 3. Location of WSHIA.

The site was remote, inaccessible and seldom visited until after the founding of the People’s Republic of China in 1949 (UNESCO World Heritage List, 2016). Tourism development has occurred since the mid-1980s and it is now an internationally renowned tourism

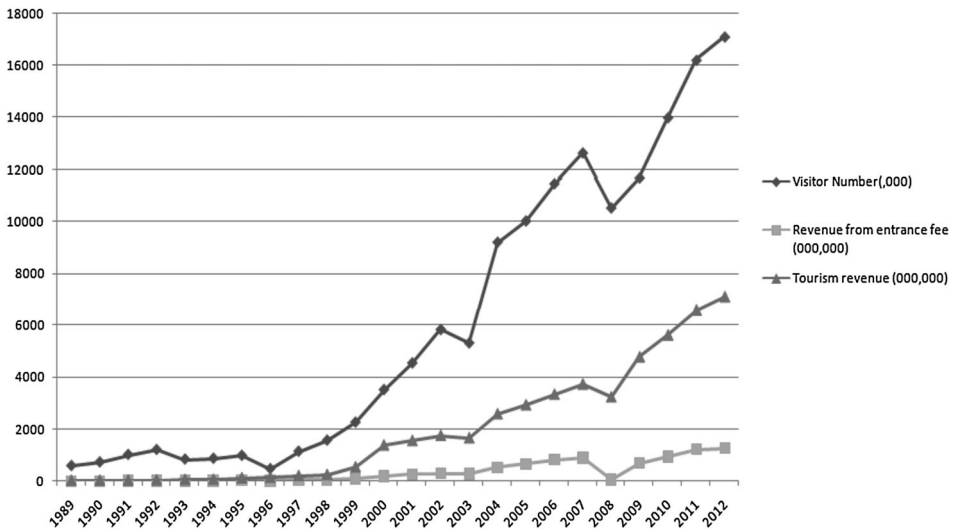


Figure 4. Tourism statistics of WSHIA 1989–2012.

Source: Wulingyuan District Government Website <http://www.zjjwly.gov.cn/wlygk/jjzk/1212.jhtml>

destination. Tourism has undoubtedly become the most important economic generator for the Wulingyuan area and Zhangjiajie city (Tang, Zhong, Fan, & Cheng, 2015; Wang et al., 2008). As shown in Figure 4, visitor numbers experienced substantial growth from 580,000 visitors in 1989 to over 17 million visitors in 2012, when total tourism revenues reached 7091 million RMB (US\$1.065 million approx) (WDG website, 2015). Such growth could only be accommodated through the development of infrastructure and various invasive construction projects that have raised the ire of UNESCO experts (Taylor & Lennon, 2011; Wang et al., 2008; Zhang et al., 2009). Thus, substantial issues must be addressed by the management agencies.

Research methods

A case study approach was adopted, as is appropriate for an in-depth investigation of a specific place. The first author coordinated the study, initiated the fieldwork and prepared an initial draft of this document. Wulingyuan was first visited by the second author in 2006 when he was part of a broader tourism planning project. At that time, the area was explored and a workshop was held with the management authorities to discuss issues and opportunities. Although the challenges of catering to a growing number of visitors as well as the tensions that existed between the management authorities was identified, detailed research was not initiated at that time. The third author is originally from Zhangjiajie city and witnessed its tourism development over the last two decades before becoming involved in the current project, particularly in the data collection and preliminary analyses.

Fieldwork was initiated for the current research in 2013, employing a qualitative research design. Primary and secondary data were collected during three field investigations in May 2013, August 2013 and February 2014. Semi-structured interviews comprised the major research method, supplemented by on-site observation and collection and review of secondary materials.

Initial contacts were made and secondary data were collected in May 2013, as well as on later visits. These mainly included UNESCO documents, government regulations and policies, government reports, news reports and tourism statistics from various sources. Careful review of these documents ensured that interviews could be conducted at a later date with a prior appreciation of many of the issues facing the management agencies.

Semi-structured interviews were conducted in August 2013 and February 2014. Management staffs were targeted due to their familiarity and involvement with the management situations of the study site. The authors strived to include both higher level management officials and lower level management staff to achieve a balanced view. Initial contact was made through personal connections. The snowball technique was used to acquire additional research participants whereby each interviewee was asked to recommend other potential interviewees. In accordance with the snowball technique, the seeking of new respondents ceased when little new information was being obtained. Eventually, 22 management staff from a variety of departments in both WDG and ZNFPAO were interviewed as shown in Table 1.

Interview questions were developed under the guidance of the multi-agency management model with a focus on collaborations between the two management bodies. Questions include main management objectives, roles and positions of stakeholders involved in the current management structure, major management policies or regulations, existing management challenges and interactions between WDG and ZNFPAO during management processes. Interviewees were also asked to provide examples to illustrate their viewpoints.

Table 1. Semi-structured interviews conducted at WDG and ZNFPAO.

Time	Number of interviewees	Interviewee	Interview questions
August 2013	10	<i>Management staff from WDG:</i> General office, heritage preservation office, tourism bureau, construction bureau, planning bureau <i>Management staff from ZNFPAO:</i> General office, tourism bureau, forestry division	<ul style="list-style-type: none"> • Management structure of WSHIA • Management status • Relationship between WDG and ZNFPAO
February 2014	12	<i>Management staff from WDG:</i> General office, heritage preservation office, tourism bureau, construction bureau, planning bureau, technology bureau <i>Management staff from ZNFPAO:</i> General office, tourism bureau, forestry division, research station	<ul style="list-style-type: none"> • Relationship between WDG and ZNFPAO • Management coordination between WDG and ZNFPAO

Interviews were mostly conducted at the offices of the interviewees and lasted between 30 and 60 minutes.

Interviews were conducted in Chinese, transcribed in Chinese and thoroughly reviewed. Content analysis was performed based on the Chinese transcript. The ideas and perspectives expressed by individual interviewees were identified and summarized. Major themes that appeared in interviews were categorized based on key elements outlined in the multi-agent management model (Figure 2). Comparisons were made between interview results and the above model to verify linkages and relations. The results were then translated to English by the first author.

On-site observation was conducted throughout the three field investigations to understand site management and heritage preservation status through observing and comparing available services and facilities, interpretation, management regulations and management mechanisms between ZNFP and other sites of WSHIA. Tourist uses of major attractions and facilities were also observed. These observations were documented in field notes.

Information gained from different data sources were then compared and cross-checked (triangulation of evidence) to ensure that an authoritative and balanced understanding of the situation was obtained.

The topics that were explored were sensitive so there was a possibility that respondents might provide only official responses. In recognition of this situation, they were informed that the researchers were university-based and underpinned by curiosity rather than beholden to any funding agency. Furthermore, their anonymity was assured and, for this reason, specific respondents are not identified in this paper.

Findings

The research findings will be presented under four headings. First, the complex management structure of WSHIA will be described. Then, the importance, according to informants, of WSHIA stakeholders will be indicated in order to place WDG and ZNFPAO in context.

Then these parallel local management agencies will be compared. Finally, the current status of collaborative management will be examined.

Management structure of WSHIA

The complex hierarchical management structure is shown in Figure 5 which has been constructed from the interviews, checked with management documents and is consistent with previous research. At least three upper level government departments are directly involved related to the multiple titles Wulingyuan has been granted: the State Forestry Administration for forest parks, the Ministry of Construction for scenic areas and the Ministry of Land and Natural Resources for geological parks (Deng, Bauer, & Huang, 2003; Zhong et al., 2008).

WDG was created in the same year as WSHIA to centralize management and ensure protection of the site (WDG website, 2015; Zhang, 2006). WDG is a county-level government administrative unit directly under the administration of Zhangjiajie Municipal Government (WDG website, 2015). WDG is also the official Management Agency of WSHIA, although in this case the names of the agency and site differ. This type of management structure is common in other World Heritage Sites in China, such as Mutianyu Great Wall (Su & Wall, 2014). WDG has more than 30 departments with about 2000 staff. Although its major responsibility is defined as the preservation, utilization and management of the natural resources of WSHIA which includes ZNFP, WDG actually manages only the

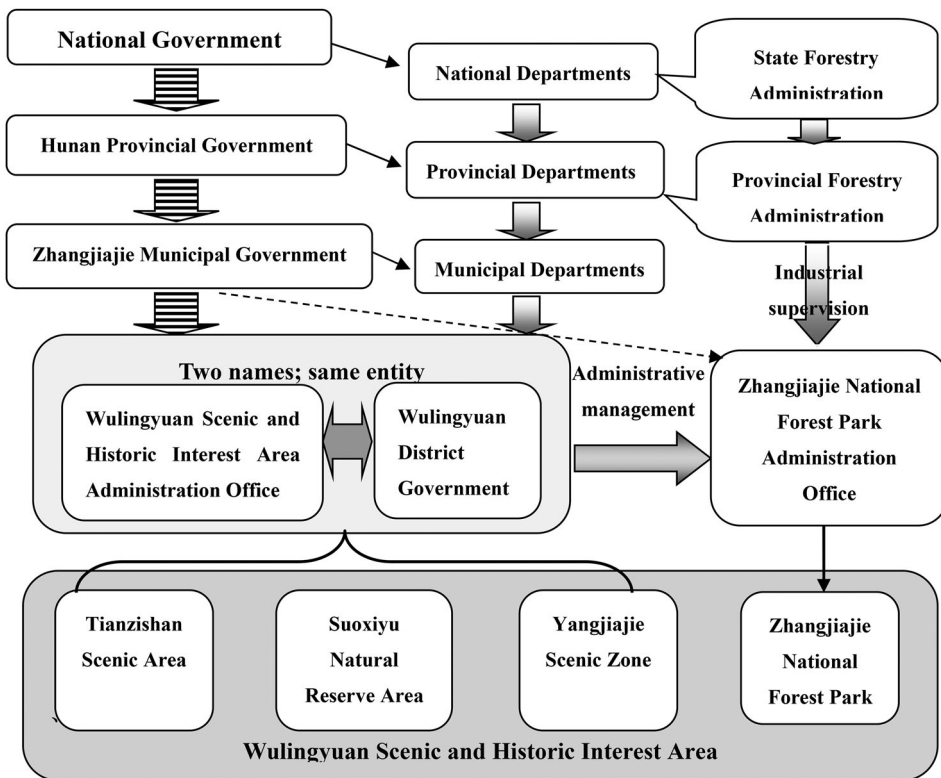


Figure 5. Management structure of WSHIA.

part of WSHIA that includes Tianzishan Scenic Area, Suoxiyu Natural Reserve and Yangjiajie Scenic Zone.

ZNFP was established prior to WSHIA and is the most well-known and most visited part of WSHIA. As a state-owned enterprise, ZNFPAO acts as a designated agency of the government. After the establishment of WDG, ZNFPAO still retains its authority for the preservation and management of ZNFP (Wang et al., 2008). Although ZNFPAO is under the administrative management of WDG, it is at the same administrative level as WDG and reports directly to the Provincial Forestry Administration (Zhang, 2006). Currently, ZNFPAO has about 1000 staff.

Hunan Province Wulingyuan World Heritage Preservation Regulation (hereafter called the Regulation) is the major provincial level policy regulating management of the heritage of WSHIA. It was the first regulation of this kind in China. It has provisions on the relationship between WDG and ZNFPAO and was created as a response to the parallel management structure at WSHIA. The Regulation was approved by the Standing Committee of the People's Congress of Hunan Province and came into effect 1 January 2001 and was amended in 2011. According to the Regulation, WDG is responsible for the preservation and management of WSHIA. ZNFPAO must comply with the planning and management of WSHIA, and manage and preserve ZNFP according to relevant laws and regulations. In addition, Zhangjiajie Municipal Government has a supervisory role, overseeing the overall management of WSHIA, including the territories managed by both WDG and ZNFPAO. This arrangement is in line with the territorial management of other World Heritage Sites in China. As written in the Regulation, construction projects at ZNFP need to be first approved by the Provincial Forestry Administration and then go through the usual project approval procedure through Zhangjiajie Municipal Government.

In summary, the management of WSHIA is shared by WDG and ZNFPAO. The territories over which they exercise authority are clearly delimited. As shown in Figure 5, WDG and ZNFPAO are at the same administrative level in the management hierarchy, but the latter is under administrative management of the former. Moreover, they are under different management lines: ZNFPAO to the Provincial Forestry Administration whereas WDG reports directly to Zhangjiajie Municipal Government, which also exerts some control over ZNFPAO. The micro-level management complexity is further complicated through the management hierarchy, involving different government departments and policies. Therefore, the two major management entities of WSHIA relate to each other both vertically and horizontally, forming an unusually dense and interlocking "grid pattern" of management relationships. It is indicated as one of the major management challenges by interviewees from both WDG and ZNFPAO.

In addition to national regulations, the provincial government established the Hunan Province Wulingyuan World Heritage Preservation Regulation to guide heritage preservation and tourism management at WSHIA. In consequence, Zhang (2006) has argued that heritage tourism development at WSHIA has not only changed the regional economy, but has also resulted in modifications to the administrative structure of Hunan Province.

WSHIA stakeholders

Interviews revealed that major stakeholders at WSHIA include WDG, ZNFPAO, Zhangjiajie Municipal Government, related government departments (i.e. Forestry Administration, Ministry of Construction and Tourism Bureau), residents, business operators, tourists and research institutions. To further identify stakeholder links with site development, using a

Table 2. Evaluations of the involvement of stakeholders by management staff.

Stakeholder	Mean scores		
	Importance in the management process	Ability to influence site development	Level of impacts received from site development
WDG	4.88	4.25	4.88
ZNFPAO	4.88	4.25	4.88
Zhangjiajie Municipal government	4.25	4.25	4.00
Related government departments	4.88	4.88	3.25
Residents	4.88	4.50	4.25
Business operators	3.75	3.50	3.38
Tourists	4.00	3.50	3.00
Research institutions	3.50	3.50	2.63

Note: A 5-point Likert scale is used with 1 indicating the lowest level of importance, ability or impacts and 5 indicating the highest level.

5-point Likert scale, interviewees were asked to rate the importance of each stakeholder in the management process, their level of impacts received from site development and their ability to influence site development. Results are shown in Table 2. Reasons for the ratings were also requested.

As shown in Table 2, WDG, ZNFPAO, other government departments and residents were considered to be the most important stakeholders in the management process. Government departments were viewed as having the highest ability to influence site development, followed by residents, the two management bodies (WDG and ZNFPAO) and the Municipal Government. The rating was explained by one management staff from WDG as follows:

WDG and ZNFPAO were not rated high because their ability to influence site development has been highly restricted by insufficient financial resources and human capacity. Therefore, their intentions to provide a higher level of protection or better marketing of the site have not been fully realized. In contrast, related government departments, higher in the political ladder, are in a better position to influence site development due to their access to financial resources and political decision-making power. Moreover, the resource preservation activities and the implementation of preservation policies have been highly influenced by on-site residents' living and production activities, which are a big management challenge for site management.

In terms of the level of impacts, the two management bodies were considered to be highly impacted by site development, followed by residents. As one staff member from WDG commented:

Being listed as World Natural Heritage Site, we cannot do any development. How can you say the impacts are not high?

At the same time, although the construction of accommodation facilities in prominent locations has been recognized as a problem by UNESCO, the role and interests of on-site business operators were not recognized prominently by management staff. Research institutions were rated the lowest in all three dimensions, indicating that research and education interests were regarded as being less influential than other concerns.

Comparison of WDG and ZNFPAO

WDG and ZNFPAO, positioned in the grid management structure under two hierarchical management lines (Figure 4), were not regarded as the most important stakeholders by informants. Nevertheless, they are the two management bodies at the local level which undertake day-to-day operations and management at designated areas within WSHIA. There are clear geographical boundaries of authority. Sharing similar management priorities, both WDG and ZNFPAO have to follow similar rules and regulations while managing the site. They will now be compared in terms of sources of funding, heritage preservation, tourism management and community participation.

The interviewees revealed that, in the past five years, about 20% of funding for both agencies came from government sources, including 10% from central government, 5% from Hunan Provincial Government and 5% from Zhangjiajie Municipal Government. The majority of funding, about 80%, mainly came from entrance fees, the sale of shares in on-site facilities and the taxation of businesses with permits to operate on-site. Hence, there is a strong financial incentive to increase visitation. One entrance ticket provides access to the whole WSHIA, allowing visits to all four areas within WSHIA, and tickets can be purchased from a variety of locations. The income from the entrance fee was allocated between WDG and ZNFPAO in the ratio of 5 to 1.

Informants from both WDG and ZNFPAO commented that current funding is insufficient to support the management of tourism development and heritage preservation. According to a ZNFPAO staff member, only around 10 million RMB (US\$2 million approx.) was used for heritage preservation and 23 million (for US\$4.6 million) for tourism development at ZNFP in the most recent five years, which restricted both preservation and tourism promotional activities.

Both WDG and ZNFPAO informants indicated that heritage preservation was their major responsibility with similar management measures implemented to support preservation and monitoring of resources, including forest restoration, fire control, regulation of construction projects and monitoring of wildlife and environmental quality. However, heritage preservation plans were made exclusively for their specific areas by WDG and ZNFPAO, without consultation with other stakeholders such as residents, whose capabilities were not much valued by the management. Staff members commented: "Residents do not have the capacity to participate. Even if they are involved, they cannot raise any ideas" and "They do not have heritage preservation awareness and they just want to get economic benefits from tourism".

As the nominal management body of WSHIA, WDG submits regular heritage preservation reports to the Ministry of Construction, the central government department responsible for World Heritage Sites. However, the reports are based on WDG's area of responsibility and exclude ZNFP. As a National Forest Park under direct supervision by the Forestry Administration, ZNFPAO does not report regularly on heritage preservation. As a result, the comprehensiveness and representativeness of current heritage preservation reporting can be questioned. These reports are not accessible to the public.

In general, WDG and ZNFPAO are responsible for tourism operation within their boundary of responsibility. Although both bodies operate under the guidance of Zhangjiajie Municipal Government, specific visitor management measures have not been consistent. For example, WDG fines visitors who damage the environment but such fines are not imposed by ZNFPAO. Cooking on open fires is allowed by WDG, but is prohibited by ZNFPAO. Such inconsistencies are likely to cause misunderstanding and confusion among tourists. Moreover, interviews revealed competition and tensions between the

agencies. An interviewee from ZNFPAO commented “We are doing better in visitor management than WDG”; whereas interviewees from WDG complained that ZNFPAO did not impose the same management measures as they did.

However, collaboration exists in tourism marketing with activities allocated between WDG and ZNFPAO by the Zhangjiajie Municipal Government. WDG is responsible for marketing to the north, south-west and Pearl River Delta areas of China and to the South East Asian market. ZNFPAO is responsible for the Yangtze River Delta and Taiwan markets. All promotions feature WSHIA as a whole.

In December 2005, WSHIA was listed as one of the 24 national digital tourism sites by the State Ministry of Construction with funding of 90 million RMB (US\$18 million) to WDG to establish a WDG official website with networking, security and application support platforms. Electronic systems were also developed and implemented to facilitate real-time video surveillance, a guide system, an LED large-screen multi-media system, vehicle scheduling, multi-media touch-screen navigation, environmental monitoring, forest fire prevention and publishing capabilities. However, this initiative was restricted to areas under the management of WDG. ZNFP, the most visited part of WSHIA, was excluded, thereby restricting the functionality and effectiveness of the system.

Interviews and on-site observations also indicated that levels of local participation in tourism differ between WDG and ZNFP. The latter has been developed for more than 20 years as the core tourism area. Here, most local people are involved in tourism by operating shops, working for tourism enterprises or for the management office or running family hotels or restaurants outside the core area. In comparison, in areas managed by WDG, only about one-third of the residents are involved in tourism-related activities. In addition, as reflected in interviews, ZNFPAO provides higher economic compensation for restrictions on residents’ use of forestry resources than WDG. Thus, residents in ZNFP enjoy a higher level of involvement in tourism than in WDG with relatively better economic benefits.

Collaborative management

Collaboration between the two local management bodies, WDG and ZNFPAO, should be constantly required as their management areas together are named WSHIA, which are also designated as a World Heritage Site, a Geopark and a National Scenic Area. The status of their collaborative management is analysed using the key criteria embedded in the multi-agency management model (Figure 2): the coordination organization and collaboration mechanisms. Then, the relationships between the two management bodies are discussed.

As demonstrated in Table 3, current collaboration between WDG and ZNFPAO is weak and superficial with ambiguous sharing of the coordination responsibility between WDG and Zhangjiajie Municipal Government and lack of an adequate mechanism to guide the collaboration process.

The research revealed that two organizations, WDG and Zhangjiajie Municipal Government, are currently undertaking coordination roles. But, each has constraints. Moreover, the division of responsibility is blurred, and current policy support to authorize the coordinating power is insufficient. WDG, as district government, is officially assigned the administrative power over WSHIA, including ZNFP. The human resources of ZNFPAO are managed by WDG. However, as both WDG and ZNFPAO are at the same administrative level, WDG does not have the full capacity to resolve disputes. The authority of WDG over ZNFPAO is only nominal. One interviewee from WDG described the relationship with

Table 3. Analysis of the status of collaboration between WDG and ZNFPAO.

Collaborative management criteria	Collaboration between WDG and ZNFPAO
Coordination agent <ul style="list-style-type: none"> • Position in the management hierarchy • Legislation 	WDG and Zhangjiajie Municipal Government share the coordinating role <i>WDG:</i> <ul style="list-style-type: none"> • Same administrative level with ZNFPAO • Administrative management of ZNFPAO legalized by the Regulation <i>Zhangjiajie Municipal Government:</i> <ul style="list-style-type: none"> • Higher in the management hierarchy • Project approval of ZNFPAO be the Regulation
Coordination mechanism <ul style="list-style-type: none"> • Scope of collaboration • Geographical boundary of jurisdiction • Management and operation standards • Monitoring scheme • Conflict resolving scheme • Information sharing scheme 	Hunan Province Wulingyuan World Heritage Preservation regulation <ul style="list-style-type: none"> • Scope of collaboration briefly mentioned • Clear geographical boundary of jurisdiction • N/A • N/A • N/A • N/A

ZNFPAO as follows: “it seems we could manage them, but we cannot actually manage them”. In addition, as shown in Figure 4, Zhangjiajie Municipal Government directly supervises WDG. According to the territorial management of World Heritage Sites in China, Zhangjiajie Municipal Government is also responsible for the planning and monitoring of site-level activities, such as marketing and the approval of construction projects. Therefore, in spite of the fact that ZNFPAO is under the direct supervision of the Provincial Forestry Administration, some control is exerted by Zhangjiajie Municipal Government. According to an interviewee from WDG, “ZNFPAO is like an independent kingdom, but it does not cause big problems”.

In terms of collaboration mechanisms, as previously discussed, Hunan Province Wulingyuan World Heritage Preservation Regulation guides the management of WSHIA, including both heritage preservation and tourism management. According to the Regulation, Zhangjiajie Municipal Government is responsible for the overall management of WSHIA and WDG is responsible for specific management operations. ZNFPAO must comply with the overall plan for WSHIA, which guides their management operations. All construction projects on site need to be approved by Zhangjiajie Municipal Government.

However, from the perspectives of Zhangjiajie Municipal Government and WDG, the Regulation does not address adequately the specific roles and responsibilities of ZNFPAO. No detailed heritage preservation and tourism management standards are currently included to guide management practices and ensure consistency. No provisions are stipulated to deal with inconsistency or disputes between the two management bodies. Moreover, there is no guidance on inter-organizational communications and information dissemination. In fact, most interviewees acknowledged that the two management bodies seldom communicate with each other. WDG does not usually intervene when different management activities are implemented by ZNFPAO.

As a result of the ambiguous management system, the unclear division of responsibility and the lack of communication, tensions exist between ZNFPAO and WDG. An official from WDG commented that:

ZNFPAO is a barrier for WDG in management of WSHIA, which is causing inconsistency in management policies and operations. The administration of ZNFPAO human resources by WDG is only a nominal aspect of management. So we let ZNFPAO do whatever they want to do. Although we have leadership responsibility, they will be directly responsible if any incidents happened.

At the same time, an official from ZNFPAO commented that:

ZNFPAO strictly complies with all policies and regulations from WDG. However, the government assigned unnecessary social management responsibilities to ZNFPAO. We also need to take care of local residents within ZNFP, which weakens our site management functions.

In summary, the shared management of WSHIA between WDG and ZNFPAO lacks full collaboration, which reduces management efficiency. Currently, neither WDG nor Zhangjiajie Municipal Government acts effectively to coordinate responsibilities and deal with disputes. Thus, an effective collaboration mechanism is lacking so that the co-existence of two parallel bodies with shared management responsibilities has led to tensions and unresolved management challenges.

Discussion

The study shows that WSHIA's parallel local management agencies, WDG and ZNFPAO, although of similar status with clear geographical boundaries of responsibility, are under different management lines, reporting to different departments. Roles and responsibilities are not clearly defined in the Hunan Province Wulingyuan World Heritage Preservation Regulation. As a result, the co-existence of WDG and ZNFPAO with both horizontal and vertical relations in the grid management system has resulted in the inefficient use of human and financial resources, and inconsistency in management, as well as tensions between WDG and ZNFPAO.

Resolution of these problems requires action at the provincial level, which will likely also require approval at the state level, to put in place a more effective management agency in a simplified management structure. However, due to historical reasons, the shared management between WDG and ZNFPAO is likely to be retained for some years to come. In this context, the discussion of measures to facilitate effective collaboration and enhance management efficiency is pertinent and necessary.

First, research results demonstrate that the voices of ZNFPAO or the Provincial Forestry Administration are not properly represented in management issues at WSHIA, nor are they properly involved in site-level projects, reducing the effectiveness of the current regulation and leading to management disputes. It is suggested that similarities and differences of roles and responsibilities between WDG and ZNFPAO should be clearly acknowledged in policies, such as the Regulation. As ZNFP is an integral part of WSHIA, both WDG and ZNFPAO should be involved in planning and plan implementation, management and assessment and site-level projects.

Moreover, current collaboration between WDG and ZNFPAO is weak and superficial due to the lack of an effective coordination agency and an incomplete coordination

mechanism. Considering the current interlocking management structure, we suggested that Zhangjiajie Municipal Government, higher in the management hierarchy, may be in a better position to act as the primary coordination agency, responsible for policy-making, monitoring and resolving conflicts. This should be clarified and legalized through provincial regulations, and will need to be accepted by agencies at this and higher levels of government, including the Provincial Forestry Administration.

Second, the current collaboration mechanism is not sufficient to regulate collaborative relations between the two management bodies. First, detailed operation standards on heritage preservation and tourism management should be developed to guide the daily operation of WDG and ZNFPAO, including the specification of overall goals and objectives with individual responsibilities and rules for benefit sharing. This could reduce inconsistency and contribute to the resolution of potential conflicts. Moreover, which organization is responsible for operation monitoring, and when and how monitoring is conducted should be clarified. And a complete conflict resolution scheme should be developed to regulate which organization is responsible for initiating the process to resolve conflicts if conflict arises. In addition, policies should be set up to require and formalize inter-organizational communications and information dissemination between WDG and ZNFPAO. Again, both Zhangjiajie Municipal Government and the Provincial Forestry Administration should be involved in setting up the collaboration mechanism with responsibilities properly clarified and distributed.

Conclusions

World Heritage which, by definition, involves international and state agencies, as well as numerous other stakeholders at intermediate and local levels, constitutes a complex context for decision-making. Countries throughout the world are charged with the establishment of administrative structures for very special places that must manage the tensions between preservation and development.

Previous research on partnerships and collaboration in a tourism context has focused upon relations between markedly different stakeholders. Scant attention has been given to shared management of the same site between agencies at the same level in the administrative hierarchy, which is not rare a situation in China due to the current grid management structure and the complex land ownership structure. Therefore, this paper fills a gap by examining critically the position, relations and interactions of the two management agencies of WSHIA. Lessons learned from WSHIA also have relevance to other World Heritage Sites co-managed by overlapping agencies in China and elsewhere.

The second contribution of this paper is in the development of a multi-agency management model of World Heritage Sites based on previous research on collaboration and inter-organizational interactions. The model emphasizes that the existence of an appropriate coordination agency and a set of collaboration mechanisms is critical to the effective collaboration among management agencies. A list of key collaboration mechanisms is included. The multi-agent management model has proven to be effective in guiding the systemic examination and evaluation of shared management among multiple agencies at World Heritage Sites and helps to quickly identify areas for improvement.

Heritage tourism management often involves a variety of stakeholders and impacts multiple groups with different values, interests and priorities, suggesting the need for a collaborative multi-actor perspective. Although details discussed in the study are specific to WSHIA, complex management systems resulting from a grid management structure are

typical of many Chinese World Heritage sites and, indeed, many policy arenas in China. Therefore, measures suggested in addressing the challenges can be replicated in similar studies and lessons learned from this study can shed lights on other sites with a complex management structure in China and elsewhere.

However, the present research relied primarily on official documents and interviews with the staff of two local management agencies. Detailed examination of public decisions is difficult in a situation where most such decisions are made behind closed doors and planning and management documents are not widely available. Moreover, the voices of other stakeholders, such as residents, entrepreneurs, tourists and many lower level staff of the two management bodies are not represented in this paper. Also, higher level government departments, including Zhangjiajie Municipal Government and the Provincial Forestry Administration, were not successfully approached to obtain their perspectives and explore the power dynamics, especially from local to provincial, in the management hierarchy. Future research could explore residents', tourists', higher level governments' and other stakeholders' perspectives on the complicated management of WHSIA, as well as other sites managed by multiple agencies, to provide different lenses through which the management of heritage sites in China can be understood.

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