IUCN Conservation Outlook Assessment 2017 **(archived)**
Finalised on 09 November 2017

Please note: this is an archived Conservation Outlook Assessment for Wulingyuan Scenic and Historic Interest Area. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Wulingyuan Scenic and Historic Interest Area

SITE INFORMATION

Country:
China
Inscribed in: 1992
Criteria:
(vii)

Site description:
A spectacular area stretching over more than 26,000 ha in China's Hunan Province, the site is dominated by more than 3,000 narrow sandstone pillars and peaks, many over 200 m high. Between the peaks lie ravines and gorges with streams, pools and waterfalls, some 40 caves, and two large natural bridges. In addition to the striking beauty of the landscape, the region is also noted for the fact that it is home to a number of endangered plant and animal species. © UNESCO

SUMMARY

2017 Conservation Outlook

Significant concern

The integrity of the property generally, and its natural scenic and aesthetic values in particular, have been impacted by rapid tourism growth and burgeoning visitor numbers, which both remain a significant challenge to management. Air and water pollution is an additional threat both to the scenic values of the property and to its biodiversity. Active intervention by management to date has alleviated the problems somewhat, but further improvements in management are needed, in particular to regulate tourism numbers, simplify the currently complex bureaucracy, and address threats in the buffer zone and surrounding lands. Furthermore, although commercial developments that may have a negative impact on the Outstanding Universal Value of the property are forbidden, high visitation is likely to continue to generate a demand for future development of tourism facilities and infrastructure.

Current state and trend of VALUES

High Concern
Trend: Improving

The natural landscape and its outstanding scenic and aesthetic values and attributes are locally severely compromised by excessive and largely unchecked growth of tourist operations and facilities. These impacts are accentuated by the rapid and continuing increase in visitor numbers causing overcrowding on some days during the high season, in excess of both the physical and social carrying capacity of the property. Consequences of tourism and visitor pressures include loss and fragmentation of natural vegetation and wildlife habitat, disruption of ecosystems and species, increased carbon emissions (Tang et al., 2017), reduction of scenic attributes and intrinsic wilderness values, and lessening of visitor satisfaction. Management interventions to demolish illegal buildings and restore affected areas have been taken in the past, and further such interventions are ongoing between 2015-2018 (IUCN consultation, 2017; SOC

report, 2015).

Overall THREATS

Low Threat

The threat from rapid and unchecked tourism growth and burgeoning visitor numbers remains the greatest challenge for managers. It calls for a greater level of management intervention to reduce the impacts on the natural values of the property from urbanization and commercial development in its buffer zone. Also of considerable concern is threat from pollution of air and water, some of which is a consequence of tourism development. Additional but lower threats originate from within the local community relating to agricultural and other land uses, and from modification to waterways and land surfaces, which is contributing to increased hazards from high-magnitude, low-frequency events, particularly flooding and landslides.

Overall PROTECTION and MANAGEMENT

Some Concern

There are some serious deficiencies in management of the property. That of greatest concern relates to control of rampant tourism development. Management authorities have failed to maintain a proper balance between retention of the outstanding natural value of the property and the pressures of mass tourism leading to urbanization and commercialization of significant parts of the property. Remedying this unsatisfactory situation calls for a greater level of management intervention to reduce the impacts on the natural values of the property from continuing insufficiently regulated growth in tourism. Another problem concerns the myriad of agencies involved in decision-making and the complex and unworkable bureaucracy, which leads to improperly planned and uncoordinated action. Although improvements have been made in that regard by joining the Zhangjiajie National Forest Park Management Division and the Wulingyuan Scenic Area Administration into one single office, private business interests are still readily able to exploit public resources.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **An extensive and spectacular landscape of majestic quartz sandstone peaks**
Criterion:(vii)

The quartz sandstone peak forest landscape in Wulingyuan consists of more than 3,000 sandstone columns and peaks, presenting a spectacle unlike any other of its kind in the world. Between the peaks lie ravines and gorges with streams, pools and waterfalls. There are more than 40 caves many containing speleothems, and two huge natural stone bridges, one of which rises 357 m above the valley floor (IUCN Nomination evaluation 1992; SP Periodic Report 2002; World Heritage Comittee, 2014).

Other important biodiversity values

► **Diversity of ecosystems with rare, endangered and relict species.**

Wulingyuan was a refuge for many ancient species of flora and fauna during the Quaternary glaciations. It is home to some 3 000 species of tropical, subtropical and temperate plants, including 600 spp. of woody plants. There are116 species of 50 families of terrestrial vertebrates. Globally endangered animals include the Chinese giant salamander, Chinese water deer, Asiatic wild dog and Asiatic black bear (IUCN Nomination evaluation 1992; SP Periodic report 2002).

Assessment information

Threats

Current Threats

Low Threat

Of greatest concern is explosive growth of tourism in the 20 years since inscription of the property leading to excessive development of facilities, with increased urbanization and commercialism. These threats are being actively managed, with demolitions of illegal buildings having occurred in the past, and further interventions ongoing. Despite some management improvements, water and air pollution remain high threats, and further assessment of the effectiveness of management to reduce these impacts needs to be undertaken. Threats of lesser concern relate to modification of river networks and water flows, impacts from local community uses of land and resources, and damage from low- frequency/high-magnitude events especially floods and landslides.

▶ Water Pollution

High Threat
Inside site, extent of threat not known

The 2014 IUCN World Heritage Outlook reported direct discharge of sewage and wastewater into waterways from residences, hotels and tourist centres, fertiliser and pesticide runoff from agricultural lands, growth of algae with general loss of water quality and reduction of drinking water. It also reported atmospheric pollution and acid rain, especially due to increase in sulphur dioxide levels from burning of coal and of carbon monoxide from vehicle exhausts (IUCN/WHC SOC Report 1998; Huang Liangbin 2006; Wei Xiang 2011), and that insufficient buffer zones or a lack of buffer zones in some parts of the WH property (Figure 2, State Party of China, 2015) cannot mitigate the negative impacts of pollutants effectively. Monitoring undertaken from 2014 to 2016 is reported to indicate that water quality of Longweixi, Shuiraosimen Wujiayukou, and Huanglongdong are all in line with

corresponding requirements, with the former three meeting the class II standard (i.e. drinking water) of surface water quality, and Huanglongdong meeting the class III standard. As for air quality, in 2015 and 2016, ambient air quality measured at Yuanjiajie station met the first class standard, while it met the second class standard at Weiyang station (IUCN consultation, 2017). Further review of monitoring data is needed to gain a better understanding of the severity of water and air pollution and the effectiveness of measures taken to manage these issues.

► Identity/ Social Cohesion/ Changes in local population and community

Low Threat
Inside site, extent of threat not known

Tens of thousands of residents in the property (accurate numbers unspecified) with extension of housing and commercial areas causing increased urban development and loss of natural land and ecosystem disturbance. Sewage discharge and chemical runoff from residential areas and agricultural lands (but with promotion of organic instead of chemical fertilizer since 2009 (IUCN consultation, 2017)). Illegal hunting and collection of firewood (IUCN/WHC SOC Report 1998; Huang Liangbin 2006; Wei Xiang 2011) reported in the 2014 IUCN World Heritage Outlook are reported to no longer be an issue, due to improvements in living standards and in awareness of the need for protection among the local populace (IUCN consultation, 2017).

► Dams/ Water Management or Use

Low Threat
Inside site, extent of threat not known

Construction of dams and reservoirs for flood control and water uses; dredging of river beds; changes of river courses; constriction of flow discharge due to riverbank protection works and house construction; and filling in of springs have previously been reported (IUCN/WHC SOC Report 1998; Huang Liangbin 2006; Wei Xiang 2011).

► Storms/Flooding, Avalanches/ Landslides

Low Threat

Inside site, extent of threat not known

Flooding intensity and frequency increasing due to river course alterations and discharge restrictions. Landslides increasing due to clearing of forests and instability of slopes due to undercutting by road construction (IUCN/WHC SOC Report 1998; Huang Liangbin 2006; Wei Xiang 2011). No floods are reported to have occurred in recent years (IUCN consultation, 2017).

► Tourism/ Recreation Areas

Low Threat
Inside site, localised(<5%)

Excessive and unchecked development of facilities especially in the decade following inscription of the property. Urbanization and commercialization of key scenic areas and main entrances. Towns developed in the property and villages grew into cities in the buffer zone and surrounding lands. By 2005, five new major tourist roads and a railway line constructed, two cable car lines and a 300m-high glass elevator installed, and 40 new hotels and restaurants built in the property. Serious loss of scenic and aesthetic quality, intrinsic wilderness attributes and traditional cultural values affects 5.34 km2 (2.02%) of the total area of the property (SOC report, 2015). Considerable localized environmental damage and disruption, including rock blasting, soil erosion, water and air pollution, and forest fragmentation causing plant and animal habitat loss and ecosystem disturbance (IUCN/WHC SOC Report 1998; SP Periodic Report 2002; Huang Liangbin 2006; Zhang 2008; Wei Xiang 2011). Extensive removal of illegal buildings (including the above-mentioned 40 hotels and restaurants) and restoration of affected areas has taken place between 1999 and 2003, and again between 2006 and 2009 (IUCN consultation, 2017; SOC report, 2015). A third phase of the demolition project is ongoing between 2015-2018, and it is noted that at present, no hotel, restaurant or guest house exist within the property.

► Tourism/ visitors/ recreation

High Threat
Inside site, scattered(5-15%)

Rapid increase from less than one million/yr. in 1992, to 17 million /yr. by 2012. Between January and October 2016, 22.8 million "person-time" were reported, equivalent to 4,066,200 visitors in the core area, which is within

the carrying capacity defined by the Wulingyuan Scenic Area Master Plan (2005-2020) of 5.56 million visitors per year (IUCN consultation, 2017; SOC report, 2015). Development of mass tourism operations. Physical and social carrying capacity exceeded, leading to undesirable environmental impacts and loss of visitor satisfaction (IUCN/WHC SOC Report 1998; Huang Liangbin 2006; Wei Xiang 2011). Rapid growth in visitation and the tourism industry have also resulted in significant increases in carbon emissions (Tang, Zhong, and Ng, 2017).

Potential Threats

High Threat

Although management actions are being taken to remove illegal buildings, high visitation is a constant management challenge, which may lead to further demands for development of tourism facilities and infrastructure in the future.

► Tourism/ visitors/ recreation, Tourism/ Recreation Areas

High Threat
Inside site, localised(<5%)
Outside site

Although management actions are being taken to remove illegal buildings, high visitation is a constant management challenge, which may lead to further demands for development of tourism facilities and infrastructure in the future.

Protection and management

Assessing Protection and Management

► Relationships with local people

Some Concern

There has been significant wide-spread disturbance of the residential community through re-location and re–housing (SP Periodic Report, 2002). Negative perceptions of relocation and resettlement are common among the residents (Wang Kai, et al., 2017). There is expressed concern that traditional

cultural practices and values are being lost (XIANG, 2011).

▶ Legal framework

Mostly Effective

Newly formulated regulations on World Natural Heritage Protection are commendable.

▶ Enforcement

Some Concern

Weak enforcement remained a serious problem in 2006 (Huang Liangbin 2006). The establishment of the Wulingyuan Scenic Area Law Enforcement Bureau is gradually improving law enforcement at the property (IUCN consultation, 2017).

▶ Integration into regional and national planning systems

Some Concern

Multiple agency management and complex bureaucratic systems have previously been problematic. In January 2015, Zhangjiajie municipal government developed the "Zhanjiajie Wulingyuan scenic area management system reform work programme", and joined the Zhangjiajie National Forest Park Management Division and the Wulingyuan Scenic Area Administration into one office and is taking measures to rationalize the Wulingyuan Scenic Area management system and operational mechanism (IUCN consultation, 2017). These are important steps towards improving integration of the property into regional and national planning systems, however, private business interests are still readily able to exploit public resources (Huang Liangbin 2006; Su Ming Ming et al., 2017).

▶ Management system

Mostly Effective

Comprehensive revision of the property management plan in 2005 has improved goals, policies and monitoring in particular. There are still some significant gaps in environmental and tourism management. The administrative framework has improved significantly since 2000 (IUCN/WHC SOC Report 1998; SP Periodic Report 2002; SOUV 2010). The revision of the

"Wulingyuan National Scenic Site Overall Plan" has also added a specific chapter on "heritage protection and landscape conservation planning", which specifically addresses World Heritage conservation.

► Management effectiveness

Some Concern

Effectiveness of management is seriously hindered by a myriad of government planning, policy-making and management agencies leading to disparate and un-coordinated goal setting and management direction (IUCN/WHC SOC Report 1998; SP Periodic Report 2002; Huang Liangbin 2006; Zijun Tang 2011). Recent measures taken to improve this situation (see above: "legal lframework" and "integration into regional and national planning systems") are positive steps. Undertaking a comprehensive management effectiveness evaluation, using an internationally recognized management effectiveness evaluation toolkit, such as "Enhancing our Heritage" would generate a better understanding of current management effectiveness, and guide further actions needed to improve it.

► Implementation of Committee decisions and recommendations

Mostly Effective

1. Manage tourism sustainably in face of rapid increase in facilities – many buildings and tourist facilities demolished, improved waste management systems installed, shuttle bus introduced, improved ticketing. 2. Prepare a species conservation status report as basis for inscription under biodiversity criteria – some lists of species compiled, and cooperation with Zhongnan Forestry University between 2015-2017 on a research plan to catalogue biodiversity. 3. Manage the buffer zone for conservation objectives – planned expansion of buffer zone not conducted. Major tourism developments and urbanization in buffer zone and surrounding lands. Extensive re-afforestation of cleared and agricultural land. 4. Seek WH emergency funding for repair of flood damage – 60,000 USD received from the World Heritage Fund to restore infrastructure damaged by floods in 1998. (WH Committee decision; IUCN nomination evaluation report; IUCN/WHC SOC Report 1998; SP Periodic Report 2002).

► Boundaries

Mostly Effective

Although the boundaries were considered inadequate in 2002 because “division between Zhangjiajie Forest Park and the neighbouring Xinglong and Shati townships in Yongding is unreasonable” (Periodic Report, 2003), this boundary coincides with the boundary of the watershed, and may therefore be considered adequate. Yongding and Wulingyuan districts are both under the jurisdiction of Zhangjiajie City, hence the boundary may also be considered to be adequate from an administrative perspective (IUCN consultation, 2017). Insufficient or lack of buffer zones in some parts of the WH property (Figure 2, State of Conservation Report, 2015) cannot mitigate the negative impacts of pollutants effectively. No further information available.

► Sustainable finance

Highly Effective

Revenue generation from tourist operations is very significant (SP Periodic Report 2002; Wei XIANG 2011).

► Staff training and development

Mostly Effective

Staff numbers have increased from approx. 500 in 2002 to almost 700 in 2011, but training requires improvement (SP Periodic Report 2002; Wei Xiang 2011). It is noted that capacity building has been a focus of management for many years with much work being done on personnel training and heritage protection (IUCN consultation, 2017).

► Sustainable use

Mostly Effective

Reduction in natural resources and environmental impacts from community agricultural and farming uses continue to be of some concern (IUCN/WHC SOC report 1998; Huang Liangbin 2006).

► Education and interpretation programs

Highly Effective

Apparently active and effective. Public education has been a focus of management for many years, with reportedly successful results (IUCN consultation, 2017).

► Tourism and visitation management

Serious Concern

Tourism growth and development remain the most important and problematic areas for management of the property. Continued tourism growth will likely exacerbate this problem. In April 2017, Wulingyuan was selected as a pilot project of the UNESCO World Heritage and Sustainable Tourism Project in China and jointly developed the Wulingyuan World Natural Heritage Demonstration with the UNESCO Asia-Pacific Heritage Research Center (Tongji University). The project is expected to be completed by the end of 2018, and is expected to contribute to improving sustainable tourism management of the property (IUCN consultation, 2017). With the effective implementation of this project and a demonstrated positive impact on the sustainability of tourism at the property, future assessments of tourism and visitation management may improve accordingly.

► Monitoring

Highly Effective

Monitoring system for environmental conditions, air and water quality, noise pollution, vegetation and ecosystems, animal habitats and species, pests and geological risks has improved markedly in recent years (SP Periodic Report 2002; SOUV 2010).

► Research

Highly Effective

There is an active research program and the results of research are taken into account for improved management (SP Periodic Report 2002).

Overall assessment of protection and management

Some Concern

There are some serious deficiencies in management of the property. That of greatest concern relates to control of rampant tourism development. Management authorities have failed to maintain a proper balance between retention of the outstanding natural value of the property and the pressures of mass tourism leading to urbanization and commercialization of significant parts of the property. Remedying this unsatisfactory situation calls for a greater level of management intervention to reduce the impacts on the natural values of the property from continuing insufficiently regulated growth in tourism. Another problem concerns the myriad of agencies involved in decision-making and the complex and unworkable bureaucracy, which leads to improperly planned and uncoordinated action. Although improvements have been made in that regard by joining the Zhangjiajie National Forest Park Management Division and the Wulingyuan Scenic Area Administration into one single office, private business interests are still readily able to exploit public resources.

► Assessment of the effectiveness of protection and management in addressing threats outside the site

Some Concern

There is little evidence from available reports that the threats in the buffer zone and surrounding lands are being effectively addressed.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► An extensive and spectacular landscape of majestic quartz sandstone peaks

High Concern
Trend:Improving

The property's outstanding scenic and aesthetic values and attributes are locally severely impacted by unchecked growth of tourist operations and facilities. A rapid increase in visitor numbers is causing overcrowding which, on some days during the high season, exceeds the physical and social carrying capacity of the property. The imbalance between retention of the outstanding natural values of the property and the pressures of mass tourism has created undesirable levels of urbanization and commercialization of some parts of the property and its buffer zone (IUCN/WHC SOC Report 1998; SP Periodic Report 2002; Huang Liangbin 2006; Zhang 2008; Wei Xiang 2011). Management interventions to demolish illegal buildings and restore affected areas have been taken in the past, and further such interventions are ongoing between 2015-2018 (IUCN consultation, 2017; SOC report, 2015).

Summary of the Values

► Assessment of the current state and trend of World Heritage values

High Concern

Trend: Improving

The natural landscape and its outstanding scenic and aesthetic values and attributes are locally severely compromised by excessive and largely unchecked growth of tourist operations and facilities. These impacts are accentuated by the rapid and continuing increase in visitor numbers causing overcrowding on some days during the high season, in excess of both the physical and social carrying capacity of the property. Consequences of tourism and visitor pressures include loss and fragmentation of natural vegetation and wildlife habitat, disruption of ecosystems and species, increased carbon emissions (Tang et al., 2017), reduction of scenic attributes and intrinsic wilderness values, and lessening of visitor satisfaction. Management interventions to demolish illegal buildings and restore affected areas have been taken in the past, and further such interventions are ongoing between 2015-2018 (IUCN consultation, 2017; SOC report, 2015).

► Assessment of the current state and trend of other important biodiversity values

Data Deficient

Trend: Data Deficient

The property's diverse ecosystems and biodiversity are impacted by the same threats that affect its outstanding scenic values, including air and water pollution. However, there is insufficient data available to assess the actual impact from these threats on biodiversity.

Additional information

Benefits

Understanding Benefits

► Outdoor recreation and tourism

Almost 5 billion yuan in tourist revenue was earned in 2009 – an increase from 2 billion yuan in 2002 (Wei XIANG 2011). A disproportionate amount of revenue benefit is going to local people. Large businesses and tourist operators are benefitting most. Many private companies are exploiting the property which is a public resource (Huang Liangbin 2006). Some hotels are State-owned.

► Commercial wells

Several dams and reservoirs have been constructed within the property and surrounding catchments. There is better control of flood discharges and reduced impact from flooding on people and property. Hydro energy generation is occurring. There is much improved water supply from reservoirs for residents and businesses in the property and buffer zone.

Summary of benefits

Tourist operations generate a very substantial amount of revenue for the property, as well as providing employment, both in the property and in the local business community. Better water management has improved water

supply, flood control and generation of energy, which has reduced the dependence on coal for fuel. The local community has benefitted greatly from employment, cash income and the support of sustainable living. There is some concern that traditional cultural practices and values are being lost.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	.		.

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