Mount Wuyi

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: China
Inscribed in: 1999
Criteria: (iii) (vi) (vii) (x)

Mount Wuyi is the most outstanding area for biodiversity conservation in south-east China and a refuge for a large number of ancient, relict species, many of them endemic to China. The serene beauty of the dramatic gorges of the Nine Bend River, with its numerous temples and monasteries, many now in ruins, provided the setting for the development and spread of neo-Confucianism, which has been influential in the cultures of East Asia since the 11th century. In the 1st century B.C. a large administrative capital was built at nearby Chengcun by the Han dynasty rulers. Its massive walls enclose an archaeological site of great significance. © UNESCO

SUMMARY

GOOD WITH SOME CONCERNS

2020 Conservation Outlook

Finalised on 02 Dec 2020

The conservation outlook of the Mount Wuyi World Heritage property is good with some concerns. Its values and attributes are in good condition but remain subject to a number of threats, including extensive modification of habitats to produce mao bamboo, localized impacts of domestic and agricultural pollution. Tourism infrastructure development is satisfactory at present but any continued growth would represent a growing threat. However, this is unlikely, at least in the short to medium term, in the context of the COVID-19 outbreak and associated fall in tourism. The successful modification of the site boundary in 2017, although minor in area (c.7%) has high significance in improving the resilience and viability of the Mount Wuyi ecosystem and biodiversity as new habitats, many additional species and larger populations of iconic key species are now included within the boundaries of the site. The property has to date enjoyed adequate protection and the management regime has been moderately effective with adequate administrative framework and comprehensive management plans. The new Wuyishan World Cultural and Natural Heritage Protection Management Plan should further improve the management and protection of the site alongside the formation of the Wuyishan National Park, which is to cover a large proportion of the site. It has been previously noted that staff capacity could be increased, especially for the newly added Jiangxi section, however this may be addressed through the national reform of protected area policy currently underway in China.
FULL ASSESSMENT

Description of values

Values

World Heritage values

► One of the largest and best preserved areas of humid subtropical forest in the world

Criterion:(x)

The property protects the largest intact forest wilderness in SE China, an area of great conservation significance. This encompasses Chinese subtropical forest and South Chinese rainforest, including 11 broad vegetation types and 55 discrete plant associations. The forests have high plant diversity and are a refuge for a host of ancient, relict plant species, many of which are endemic to China and are rare elsewhere in the country. There are 2,457 species of vascular plants have been recorded, of which 15 endangered species and 13 rare species are listed on the China Red List. The rich fauna includes 598 vertebrate species of which 49 are endemic to China, and 46 are listed under CITES. Rare and important species include Chinese tiger, clouded leopard, leopard, black muntjac, mainland serow, Cabot’s tragopan, Elliot’s pheasant and Chinese Giant Salamander. There are significant numbers of reptiles and amphibians, and 4,635 insect species are described so far. The area is also very important for migratory birds (State Party of China, 1998; World Heritage Committee, 2012; UNEP-WCMC, 2011).

► Spectacular rocky, forest-covered mountains and riverscape

Criterion:(vii)

The property comprises a rocky landscape of high peaks, 112 of which are higher than 1,000 m. Huanggang Mountain, its main peak, is 2,158m above level, making it the highest peak in Southeast China. Rugged, sheer-sided monoliths and domed cliffs in red sandstone, craggy forested gorges, cave systems and winding streams create very attractive scenery (State Party of China, 1998; World Heritage Committee, 2012; UNEP-WCMC, 2011; State Party of China, 2017).

Assessment information

Threats

Current Threats

Overall, current threats can be rated as high. Extensive swathes of mao bamboo in the nature reserve sections of the site pose threats to native vegetation and alter ongoing ecological processes and natural succession. Intense numbers of tourists using the Nine-bend stream scenic area sections of the site also poses a threat, albeit this has paused under the COVID-19 outbreak. There is a low threat from tea cultivation and mao bamboo production with associated soil erosion and loss of water quality and air pollution, with minor impacts from tourism infrastructure development in the adjacent service area.

► Water Pollution, Household Sewage/ Urban Waste Water

(Soil loss, water and air pollution)

Low Threat

Accelerated soil erosion accompanies tea cultivation, there is some water pollution from sewage and solid waste production (State Party of China, 1998; World Heritage Committee, 2012; WCMC, 2011). However, with protected area refom ongoing in China, the newly formed national park authorities have been working closely with the local government to continue effectively managing Jiuqu Stream (IUCN Consultation, 2020). The 2018 water quality monitoring indicators of Jiuqu Stream, with the exception of
fecal coliforms and total phosphorus, are superior to the Class I standard of “Surface Water Environmental Quality Standard” (GB 3838-2002) (IUCN Consultation, 2020).

**Forestry/ Wood production**

(Agriculture and livestock farming)

As of 2012, there were 24,500 residents, mostly subsistence farmers, but some are engaged in growing tea and in subsistence (bamboo) forestry. Managed Mao bamboo covers large swaths of the site replacing natural forest vegetation. Some agricultural runoff occurs and tea growing has caused loss of soil and water quality (State Party of China, 1998; World Heritage Committee, 2012; WCMC, 2011; IUCN, 2006; State Party of China 2017a). However the widespread use of chemical fertilizer has now largely been replaced by organic alternatives which has reduced harmful runoff to a certain extent, and active management interventions and the ongoing 'Returning Tea to Forest' afforestation program is addressing soil stability issues whilst increasing forested areas (IUCN Consultation, 2020). Since the boundary modification has extended the property into Jiangxi province the number of residents in buffer zone is increased but the proportion of natural habitat is increased. Only small sectors of the extension area are cultivated or used for bamboo (State Party of China 2017a).

**Tourism/ visitors/ recreation**

(Tourism development)

Annual tourist numbers increased markedly from around 450,000 in 1993 to c. 1 million by 2004 and is now reported to fluctuate broadly between 1.2-1.4 million on an annual basis (IUCN Consultation, 2020). While most tourism infrastructure is confined to a Tourist Service Centre just outside the property boundary, there is minor environmental impact inside the property (State Party of China, 1998; World Heritage Committee, 2012; WCMC, 2011). Tourism is not encouraged on the Jiangxi extension to the site (State Party of China, 2017a). Tourism numbers in 2020 are dramatically reduced as a result of COVID-19 virus shut-downs and it is not clear how these will continue in coming years.

**Potential Threats**

Pressure from population growth and village expansion around the property is a significant potential threat, including infrastructure development in the buffer zone. Climate change may also bring increased frequency of extreme weather events such as cold-weather snaps and typhoon-associated floods in summer, which poses potential threats to the subtropical forests in the site.

**Housing/ Urban Areas**

(Pressure from population growth in buffer zone)

The buffer zone is important for shielding the property from rapid social and economic development in surrounding villages, which poses a threat to the rich resources of the property (WCMC, 2011; State Party of China, 2017a). A high-speed railway and road are constructed adjacent to the NE corner of the extended buffer zone. It is not clear if this adds disturbance or serves as a protective barrier for wildlife.

**Temperature extremes, Storms/Flooding**

(Increasing frequency of extreme weather events - cold snaps in winter and typhoon driven floods in summer.)

Migrant birds and vegetation zonation may be affected. Degree of impacts not clear but increasing. Several birds in China are distributing more northerly or higher altitudes. The nominate race of one prominent species (type specimen from this site) Red-tailed Laughingthrush (Trochalopteron milnei) appears to have disappeared (Fen-Qi et al., 2015).

**Overall assessment of threats**

There are a few current and potential threats to the property, which cumulatively represent a high threat. Inside the property, agricultural activities by local residents, particularly bamboo cultivation in
the nature reserve and tea cultivation in both nature reserve and scenic area, cause cause a number of issues including replacement of original vegetation and altered succession, accelerated rates of soil erosion, agricultural runoff along with domestic sewage and waste production. However, these issues are now being addressed by the site management, particularly in the part of the property which is to be included in the National Park, and therefore awarded the highest level of protection in national legislation. Tourism infrastructure development is a concern in the property as visitor numbers are very high and tourism is now the major economic mainstay of Wuyishan. Pressure from population growth and village expansion in surrounding areas means the buffer zone is very important for maintaining the integrity of the property.

Protection and management

Assessing Protection and Management

▶ Management system  Mostly Effective

The National Administration of Forests and Grasslands of the People's Republic of China has assumed management authority from the Ministry of Housing and Urban-Rural Development for natural WH areas and the State Administration of Cultural Heritage have the overall responsibility for the management of the cultural relics of the property. The Steering Committee of Mount Wuyi World Heritage site oversees its overall management. The management of the newly added Jiangxi section falls under the Department of Forests and Grasslands of Jiangxi province. The enlarged property is now jointly managed by the People's Government of Jiangxi Province and Fujian Province through a coordination committee (State Party of China, 2017). At the time of this assessment, the Beijing Tsinghua Tongheng Urban Planning, Design and Research Institute have been commissioned to compile the "Wuyishan World Cultural and Natural Heritage Protection Management Plan" and work towards this is steadily advancing (IUCN Consultation, 2020). It is reported that around 80% of the World Heritage site will fall within the boundaries of the newly formed National Park under broad reforms of China's protected area system, affording this part strong legal protection (IUCN Consultation, 2020).

▶ Effectiveness of management system  Mostly Effective

The management system is considered mostly effective. With the reform to China's protected areas system, including the formation of the country's National Parks, one of which will cover around 80% of the World Heritage site (IUCN Consultation, 2020), this system is due to change- likely to include a stronger legal basis for its protection as well as increased resources. The compilation of the “Wuyishan World Cultural and Natural Heritage Protection Management Plan”, to be finalised within the next year has involved a series of surveys and extensive consultation with relevant departments, towns and villages, including experts from the National Park Administration and the national park compilation unit to ensure that policy is aligned between National Park and World Heritage management. The plan is reported to analyze the current problems in the protection and management of Wuyishan World Heritage, and proposes management and control measures (IUCN Consultation, 2020).

▶ Boundaries  Highly Effective

The boundaries of the property and buffer zone were assessed as appropriate (WCMC, 2011). A boundary modification which was approved in 2017 adds a section (7,069 ha) of Mount Wuyi lying in Jiangxi Province to the large component part of the property, and reconfigures the buffer zone (IUCN. 2017). The northern sectors of the Mount Wuyi ecosystem, now added to the site, are different from the originally inscribed area as they contain different vegetation formations (including some deciduous broadleaf forest), with more tropical broadleaf forest, more rare wildlife and many additional species not found on the southern side of the mountain (State Party of China, 2017a;b).
Intervention into regional and national planning systems

Data Deficient

N.A.

Relationships with local people

Some Concern

About 24,500 people in 14 villages lived in the site in 2012, most of whom are subsistence farmers. Historically, there have been no reports of engagement with local people in the management of the property (State Party of China, 1998; World Heritage Committee, 2012; WCMC, 2011), however more recent consultation with management of the site suggests that local community consultation has been part of the process in compiling the new ‘Wuyishan World Cultural and Natural Heritage Protection Management Plan’. Nonetheless, there is inherent conflict in that protection of the site involves reducing the area used for bamboo and tea cultivation and a lack of alternative livelihood offered in compensation (IUCN 2006). The boundary modification of the property extending into Jiangxi adds two villages to the buffer zone but no additional residents inside the property (State Party of China, 2017).

Legal framework

Highly Effective

The property consists of several protected areas and there is strong local and national legislation protecting the property and its values. The entire Mount Wuyi property is owned by the People's Republic of China (State Party of China, 1998; World Heritage Committee, 2012; WCMC, 2011; State Party of China, 2017). All areas of the enlarged World Heritage property are located within strict protection zones of national level protected areas, and are thus fully protected by national and provincial laws and regulations (State Party of China, 2017). At the time of this assessment, it is proposed that 80% of the land area of Wuyishan World Heritage is to be included in the national park pilot project. National parks, where the most stringent control measures are implemented, have the highest protection level in China. At the same time, the Wuyishan Municipal Government has strengthened the protection of the property through a series of administrative means, including the so-called "Qingshan Redemption", which refers to the purchase and storage of commercial forests in key ecological locations (IUCN Consultation, 2020).

Law enforcement

Mostly Effective

Law enforcement is adequate in both provincial sections of the property.

Implementation of Committee decisions and recommendations

Data Deficient

N.A.

Sustainable use

Some Concern

Sustainable agriculture, subsistence bamboo forestry, and tourism operations. Commercial tea growing occurs also (State Party of China, 1998; WCMC, 2011). Three famous classic tea varieties - Da Hong Pao (the most expensive tea in the world), Lapsang Suchong and Oolong originate within the site and have cultural value but are not listed as a cultural element of OUV.

Sustainable finance

Mostly Effective

The recently added areas of Mount Wuyi Jiangxi are reported to have stable funding (State Party of China, 2017); however, no up-to-date figures are available for the entire enlarged property. The establishment of the pilot Wuyi Shan National Park is likely to bring significant financial investment for the State towards the management of the components which fall within the National Park.

Staff capacity, training, and development

Highly Effective

There were 275 staff in total, 145 professional and 130 management and maintenance reported at the time of inscription (State Party of China, 1998; WCMC, 2011). More up-to-date figures are not available for the entire property. The newly added areas of Mount Wuyi Jiangxi section has 25 staff. Extensive
training programmes are available (State Party of China, 2017).

**Education and interpretation programs**

Highly Effective

Good programmes are reported. There are several cultural and natural museums and a great deal of literature is available for visitors (State Party of China, 1998; WCMC, 2011).

**Tourism and visitation management**

Mostly Effective

Tourism has growing steadily and the site is now reported to be visited by around 1.3-1.4 million people per annum (IUCN Consultation, 2020). Rafting on the Nine-Bend river is among the most popular activities, as are cave visits. Most tourist facilities are located outside the property (State Party of China, 1998; World Heritage Committee, 2012; WCMC, 2011). Visitation to the newly added Jiangxi section is limited and is only allowed by a special permit (State Party of China, 2017).

**Monitoring**

Highly Effective

A comprehensive monitoring programme is in place which encompasses air and water quality monitoring and monitoring of vegetation cover, visitation levels and biodiversity. This is based on an advanced GIS-based system developed with funding from a GEF-supported project (State Party of China, 2017). Upon designating the Wuyishan National Park Pilot in 2017, satellite image comparison and other measures have been adopted for the management of tea gardens, effectively controlling their growth within the site (IUCN Consultation, 2020).

**Research**

Highly Effective

There is a long history of biological research, with the most recent output of note being the discovery of a new amphibian species (Messenger et al., 2019), which represents the first discovery of a new frog species in the region for over 50 years. Research is also carried out in relation to the sustainable development of the local community, and has been used to inform the new management plan (IUCN Consultation, 2020).

**Overall assessment of protection and management**

Mostly Effective

Overall, the protection and management of the property can be assessed as mostly effective. The property enjoys adequate legal protection and strong administrative support, which should improve further when the new management plan comes into effect which is to be bolstered further by the establishment of the National Park to cover a large proportion of the site. However, there are concerns regarding the ability to control some impacts from activities of local residents and from tourism developments both inside and outside the property and concerns with regard to smooth cooperation between different management agencies responsible for the 5 different sections of the site, especially the 20% of the site which lies outwith the Wuyishan National Park.

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

Highly Effective

Some concern has been expressed about the growth of village population and tourism infrastructure development outside the property, which have the potential for impacting the property (WCMC, 2011). The original reserve was confined to Fujian Province but the northern side of the Mountain, only access road to Huangganshan peak and best natural habitat and wildlife are in fact outside Fujian in neighbouring Jiangxi Province. There was a great need for better coordination across the province divide but this has now been addressed as the site has been greatly strengthened now that the Jiangxi sections have been added to the site through the boundary modification process (State Party of China, 2017; IUCN Evaluation, 2017).

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**State and trend of values**
Assessing the current state and trend of values

World Heritage values

▶ One of the largest and best preserved areas of humid subtropical forest in the world

Good Trend: Improving

Historic loss of key species of note, including the Chinese tiger and the red-tailed laughingthrush (Fen-qi et al., 2015), mean that the site may not represent a full compliment of species typical of humid subtropical forests of the region. However, no other significant detrimental changes are reported in the plant and animal populations and the encroachment of bamboo and tea plantations now seems to be under control through excellent monitoring. The integrity of the site has been further strengthened by adding the Jiangxi section which added new areas of the same ecosystem contiguous with the original site, but which are somewhat different in terms of vegetation and species composition (State Party of China, 2017).

▶ Spectacular rocky, forest-covered mountains and riverscape

Good Trend: Stable

The scenic and aesthetic values and attributes of the property remain intact

Summary of the Values

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

Good Trend: Improving

The current state of the site’s natural values and attributes are assessed as as good with an increasing trend. Management authorities report to be addressing the pressures from growing numbers of people and village development in surrounding areas. The successful modification of the site boundary in 2017, although minor in area (c.7%) has high significance in improving the resilience and viability of the Mount Wuyi ecosystem and biodiversity. Some new habitats, many additional species and larger populations of iconic key species - black muntjac, Cabot’s tragopan etc. are now included.

Additional information

Benefits

Understanding Benefits

▶ Outdoor recreation and tourism

The property has become a popular tourist destination and visitor numbers are growing steadily. Tourism infrastructure is developed mainly outside the property boundaries. 2020 covid-19 virus pandemic has greatly altered the levels of visitation. Long-term supervision changes may be needed to maintain better social spacing in the future.

Factors negatively affecting provision of this benefit:
- Overexploitation: Impact level - Moderate, Trend - Increasing

▶ History and tradition

The property is of global significance for protection of archaeological sites and relics of great spiritual and cultural value. The cultural values of the origins of famous tea varieties should not be ignored.
**Soil stabilisation,**
*Water provision (importance for water quantity and quality)*

The property is important for protecting soil and water resources over a very large area.

Factors negatively affecting provision of this benefit:
- Habitat change: Impact level - Low, Trend - Increasing

**History and tradition**

The property is of significance as the birthplace of Neo-Confucianism, which is a philosophy of international religious and political importance

**Summary of benefits**

The Mount Wuyi property provides benefit to the local and national communities and to the world especially in respect of commercial and recreational tourist opportunities, conservation of biodiversity and natural ecosystems, environmental services in soil and water conservation, and protection of sites, relics and other intangible values of great antiquity and religious significance.

**Projects**

**Compilation of active conservation projects**

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